

A CATALOGUE  
OF THE TYPES AND OTHER SPECIMENS IN  
THE BRITISH MUSEUM (NATURAL HISTORY)  
OF THE GENUS *ZYGAENA* FABRICIUS,  
LEPIDOPTERA: *ZYGAENIDAE*

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THE object of the following work has been to establish the types and select lectotypes where necessary of the genus *Zygaena* Fabricius. There are some types that cannot be traced; for instance, one or two of the original specimens from the Boisduval collection cannot be found although they should be preserved in the British Museum collections. Many of the Tutt types are missing; this is not surprising as apart from his collection having been sold in 1911-12 he had the habit of naming specimens in other collections or even applying a name to a figure where this depicted an actual specimen (*vide Brit. Lep.* 1: 487, *trifolii* ab. *obscura* Tutt).

The Rothschild collections were acquired by the British Museum in 1939. The *Zygaena* collection, which was until recently housed at Tring, was built up from many sources and contained the Oberthür collection (which in itself incorporated the collections of Boisduval, de Graslin and Guenée), the Ragusa collection from Sicily, and specimens from Groum-Grschimailo, Holl and others of less importance. According to Horn & Kahle (1935-37) part of the Freyer collection was acquired by Rothschild; I can, however, find only one *Zygaena* type described by Freyer. The Frey collection was acquired by the British Museum in 1880 followed by the Zeller collection in 1884.

Each type is illustrated, together with additional specimens where necessary. The original photographs were enlarged approximately  $\times 2$  and the plates have been reduced by a half to appear natural size. The genitalia of each specimen have been examined but are only illustrated where the type is of the nominate race.

As an addendum I have included examples of paratypes and cotypes contained in the British Museum collections. This was thought advantageous as the types are scattered in various private and museum collections on the Continent.

In expressing the synonymy I have followed the system used by J. F. Gates Clarke (1955). The data on the pin labels have been included *exactly as they were written*. The data of each label are contained within inverted commas.

The reference to each description is preceded by the name of the species, subspecies or aberration as originally quoted by the author. It will be realized that, under the present classification, changes have been made and where a race was described as a species, it may now be considered a subspecies or even an aberration. There are also changes in the synonymy, much of which has already been published,

Reiss & Tremewan (1960). The following terms are employed: (1) *ssp.* = subspecies or geographical race; (2) *f.t.* = *forma tempestatis* meaning a seasonal form; (3) *f. loc.* = *forma alicuius loci* which is a form confined to one particular locality within the range of a subspecies; (4) *ab.* = aberration. These terms are based on the classification of Rothschild & Jordan (1903).

About twenty subgenera have been erected within the genus *Zygaena*, but here I have only used three, viz., *Mesembrynus* Hübn., *Agrumentia* Hübn., and *Zygaena* Fabr. This follows the classification of Reiss (1958), who has grouped the species under these three subgenera. This classification is based on the genital structure, wing pattern and biology of the species. The larvae of the species in the subgenus *Mesembrynus* feed on plants of the families Umbelliferae, Compositae and Labiatae; the larvae of the species in subg. *Agrumentia* feed mostly on hard-leaved Papilionaceae, while those in subg. *Zygaena* feed on soft-leaved Papilionaceae. It is interesting to note that the species classified according to foodplants, also show affinities in wing pattern and genital structure within each subgenus. Following this classification the species *erebus* Stdgr. (*mana* Kirby), *gallica* Obth., *nevadensis* Ramb. and *dalmatina* Boisd. (*scabiosae* auct.) are now removed from the subgenus *Silvicola* Bgff. and placed in the subgenus *Zygaena*. The subgenus *Silvicola*, which contained these four species and immediately followed the subgenus *Mesembrynus*, is now considered synonymous with subg. *Zygaena*. The structure of the genitalia of the four species show that they belong in *Zygaena*, although the fore wings normally have the streaked pattern of some species of *Mesembrynus*.

According to Reiss (1958), the species of subg. *Mesembrynus* are the most primitive. *Z. rubicundus* Hübn., with completely red fore wings, is placed at the head of the list, followed by six-spotted species such as *cambysea* Led. and *rubricollis* Hamps., etc. These are followed by the streaked species such as *favonia* Frr., *erythrus* Hübn. and *purpuralis* Brunn., etc. Next is subg. *Agrumentia*, where the species are usually six-spotted, the spots in most species are encircled with yellow, cream or white. Many species and subspecies have red or yellow abdominal rings. The red colour in the fore wing spots in *Agrumentia* began from the centre in the more primitive species. The yellowish or whitish ring then appeared as the remainder of the former colour of the fore wing spots, which are in the more primitive species of *Mesembrynus* unicoloured white, yellow, orange, light red or carmine red. *Z. cocandica* Ersch. and its subspecies *banghaasi* Bgff. are good examples. Finally, subg. *Zygaena* where the species are five- or six-spotted, the majority without the abdominal ring and all without the lighter colour surrounding the spots.

It will be realized that the species in subg. *Zygaena* are considered to be the most recent and have lost the cream or white rings around the fore wing spots. It is interesting to note that a specimen of *filipendulae* L. taken in Italy has faint cream rings around the spots of the fore wings (Reiss, *in lit.*). Apparently this form only occurs now as an extremely rare aberration and is very rarely captured. For full details of this classification see Reiss (1958).

The normal red coloration of the spots and hind wings may be replaced by orange or yellow; where this occurs in specimens with an abdominal ring, this colour replacement takes place in the ring as well. The genetics of the yellow aberrations

have been worked out in very few species, but it is highly probable that, where the yellow form occurs as a rare aberration, it is a simple recessive. However, it appears to be the dominant factor in some races, such as *transalpina* Esp. ssp. *albana* Bgff. from Mte. Albano, Italy, where the whole of the race is yellow and the red form occurs only as a rare aberration.

The wing pattern of the species may be divided approximately into three groups : (1) fore wings with three longitudinal streaks ; (2) fore wings with six spots, each spot surrounded by a yellowish or cream ring ; (3) fore wings with five or six spots without the yellowish or cream rings. All types of variation occur ; aberrant specimens having the streaks reduced or interrupted and forming spots, others having the spots coalescing and forming streaks. In normally five-spotted species an extra spot (spot 6) may occur, or in six-spotted species spot 6 may be reduced or absent. This is found not only as an individual aberration but may be found in a whole or a greater percentage of a large population, constituting a subspecies.

I have had the pleasure of discussing this work with Mr. Hugo Reiss, Stuttgart, to whom I am most grateful for his helpful suggestions and the interest he has taken. I must thank him also for his painstaking care in checking the whole of this work while in manuscript.

Regarding the illustrations my thanks are due to the staff photographers of the British Museum (Natural History), in particular to Messrs. C. Horton and N. Tanti who produced the excellent photographs of the specimens, and Mr. J. Brown who is responsible for the photomicrographs of the genitalia.

## REFERENCES

- GATES CLARKE, J. F. 1955. Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, Vol. 2, *et seq.*  
 HORN, W. & KAHLE, I. 1935-37. Entomologische Beihefte.  
 REISS, H. 1958. Versuch der Darstellung von Entwicklungsreihen bei der Gattung *Zygaena* F. (Lep.). *Z. wien. ent. Ges.* 43 : 140-147, 155-163, 181-183.  
 REISS, H. & TREMEWAN, W. G. 1960. On the synonymy of some *Zygaena* species, with descriptions of a new species and subspecies from Morocco, Lep., Zygaenidae. *Bull. Brit. Mus. (nat. Hist.) Ent.* 9, (10) : 459-468.  
 ROTHSCHILD, W. & JORDAN, K. 1903. A revision of the Lepidopterous Family Sphingidae. *Novit. zool.* 9, Suppl.

Subg. **MESEMBRYNUS** Hübner

***Zygaena rubicundus*** Hübner

*Sphinx rubicundus* Hübner, [13th. March 1814]-[31st. December 1817], *Europ. Schmett.* 2, pl. 30, fig. 137.

***Zygaena rubicundus*** Hübn. ab. ***pseudofaitensis*** Stauder

*Zygaena rubicundus* Hübn. f. *pseudofaitensis* Stauder, 1929, *Ent. Z.* 43 : 6.

(Pl. 50, fig. 3)

Lectotype : ♂ 24 mm. "Italia mer. penins. Sorrento Mte. Falto 21.6.1928 H. Stauder 1000 m"; "rubicundus f. *pseudofaitensis* Stdr. Type".  
 ex Rothschild collection. Slide No. 436.



There are two additional specimens, one labelled "type", from the same locality and with the following dates: "3" and "5.7.1928.". The specimens originated from Mte. Faito, erroneously spelt Mte. Falto on the pin label.

*Zygaena rubricollis* Hampson

*Zygaena rubricollis* Hampson, 1900, *J. Bombay. nat. Hist. Soc.* **13**: 224, pl. B, fig. 9.

(Pl. 50, fig. 8)

Type: ♀ 36 mm. "Shishi Kuh Valley. Chitral. VII & VIII. 91.9.000-14.000 ft.

G. H. Colomb. 99-65."; "*Zygaena rubricollis*, Hmpsn. type ♀".

Slide No. 222, Pl. 64, figs. 1, 2.

*Zygaena cuvieri* Boisduval

*Zygaena cuvieri* Boisduval, 1829, *Mon. Zyg.*, p. 53, pl. 3, fig. 6.

(Pl. 50, fig. 1)

Type: ♂ 40 mm. "Cuvieri. B. persia"; "EX. MUSAEO Dris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection.

The abdomen is badly damaged, especially on the underside; the genitalia are missing.

There is some doubt concerning the locality on the pin label. Boisduval stated that the species was taken "... aux environs d'Amaden, en Perse, par feu Olivier." This is probably Amadia, which is in Iraq and which should be taken as the type locality. Referring to the history of Iraq, the country was constantly at war with Persia. In the first period of the nineteenth century Iraq was still claimed by the Persians who were finally defeated in 1823. The status of Iraq was then restored but the boundary with Persia was not agreed upon until 1847 at the Treaty of Erzurum. Boisduval stated that the species was taken by the late Olivier, so that when the specimen was captured, Amadia was probably still considered to be in Persian territory.

*Zygaena cuvieri* Boisd. ab. *confluens* Oberthür

*Zygaena cuvieri* ab. *Confluens* Oberthür, 1896, *Et. d'Ent.* **20**: 46, pl. 7, fig. 112.

(Pl. 50, fig. 2)

Type: ♂ 37 mm. "Mésopotamie"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No. 112"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 489.



*Zygaena corsica* Boisduval*Zygaena corsica* Boisduval, 1829, *Mon. Zyg.* p. 81, pl. 5, fig. 2.

(Pl. 50, fig. 4)

Lectotype: ♂ 23 mm. "Corsica BD."; "EX. MUSAEO Dris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 463, Pl. 58, figs. 1, 2.

The species was described from the mountains of Corsica.

*Zygaena aurata* Blachier*Zygaena aurata* Blachier, 1905, *Bull. Soc. ent. Fr.*, p. 213.*Zygaena aurata* Blach. ssp. *blachieri* Rothschild*Zygaena aurata blachieri* Rothschild, 1931, *Novit. zool.* 36 : 199.

(Pl. 50, fig. 5)

Type: ♂ 30 mm. "Tizi-n-Tichka, Gt. Atlas, 2450 m. 12 July 1930. (Hartert & Young)."; "*Zygaena aurata blachieri* Rothschild. Type N.Z. Vol. 36."

ex Rothschild collection. Slide No. 451.

I consider *aurata* Blach. to be a species distinct from *favonia* Frr., but Alberti (1958, *Mitt. zool. Mus. Berl.* 34 : 332) considered it a subspecies. Reiss (1930, Seitz, *Macrolep.*, Suppl., 2 : 13) treated *aurata* as a separate species, and stated that it differs from *favonia* flying in the same locality.*Zygaena loyselii* Oberthür*Zygaena Loyselii* Oberthür, 1876, *Et. d'Ent.* 1 : 34.

(Pl. 50, fig. 6)

Lectotype: ♂ 29 mm. "Lambessa R. Oberthür 1875"; "coll. Ch. Oberthür".  
ex Rothschild collection. Slide No. 446, Pl. 58, figs. 3, 4.*Zygaena loyselii* Obthr. ssp. *occidentis* Burgeff*Zygaena loyselii* var. *occidentis* Burgeff, 1926, *Mitt. münchen. ent. Ges.* 16 : 25 (new name for *occidentalis* Obthr. [preoccupied]).*Zygaena Loyselii* var. *occidentalis* Oberthür, 1916, *Lép. Comp.* 12 : 208.

(Pl. 50, fig. 7)

Lectotype: ♂ 28 mm. "Algérie Géryville 10-26 Mai 1886 Lt. Lahaye."; a photograph of the specimen on the reverse side of which is written "figuré XIIIe liv'on Etud. Entom. pl. 8. fig. 76."; "coll. Ch. Oberthür".

ex Rothschild collection. Slide No. 447.

***Zygaena loyselii*** Obthr. ssp. ***fracticingulata*** Rothschild

*Zygaena loyselii fracticingulata* Rothschild, 1925, *Ann. Mag. nat. Hist.* (9) 15 : 679.

(Pl. 50, fig. 9)

Type: ♀ 30 mm. "Grand Atlas Hte Réraya Alluud 133"; "*Z. loyselii fracticingulata* Rothschild. Type"; "coll. Ch. Oberthür."; "Original zur Abbildung des *Z. fracticingulata* ♀ im Seitz, Suppl., Bd. 2, Tafel 11 1930. H. Reiss." ex Rothschild collection. Slide No. 448.

***Zygaena loyselii*** Obthr. ssp. ***olivacea*** Rothschild

*Zygaena loyselii olivacea* Rothschild, 1925, *Ann. Mag. nat. Hist.* (9) 15 : 680.

(Pl. 50, fig. 10)

Type: ♀ 31 mm. "Taza, Maroc, (P. Rotrou)."; "*Z. loyselii olivacea* Rothschild. Type"; "Original zur Abbildung des *Z. olivacea* ♀ im Seitz, Suppl., Bd. 2, Tafel 11 1930. H. Reiss."

ex Rothschild collection. Slide No. 449.

***Zygaena loyselii*** Obthr. ssp. ***montana*** Rothschild

*Zygaena ungemachi montana* Rothschild, 1925, *Bull. Soc. Sci. nat. Maroc.* 5 : 140.

(Pl. 50, fig. 11)

Type: ♂ 26 mm. "Nr. Azrou, Maroc, Middle Atlas, 1300 m. 14. V. 24. (Hartert & Young)."; "*Z. ungemachii montana* Rothschild. Type"; "Original zur Abbildung des *Z. montana* ♂ im Seitz, Suppl., Bd. 2, Tafel 11 1930. H. Reiss." ex Rothschild collection. Slide No. 450.

***Zygaena favonia*** Freyer

*Zygaena Favonia* Freyer, 1845, *Neue Beitr. zur. Schmett.* 5 : 76, pl. 428, fig. 1.

***Zygaena favonia*** Frr. ab. ***flava*** Rothschild

*Zygaena favonia* ab. *flava* Rothschild, 1917, *Novit. zool.* 24 : 336.

(Pl. 50, fig. 12)

Type: ♂ 25 mm. "Djebel Djeloud Tunis 31.3.12"; "335" ex Rothschild collection. Slide No. 454.

***Zygaena favonia*** Frr. ssp. ***vitrina*** Stdgr. ab. ***powelli*** Oberthür

*Zygaena Favonia-Powellii* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 175.

(Pl. 50, fig. 13)

Type: ♀ 26 mm. "Khenchela (Prov. Constantine) H. Powell juin 1908"; "*Zygaena favonia* 15.6.08 Khenchela"; "A servi de Modèle à J. Culot de

Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX 175"; "coll. Ch. Oberthür.".  
ex Rothschild collection. Slide No. 453.

***Zygaena favonia* Frr. ssp. *borreyi* Oberthür**

*Zygaena Favonia* var. *Borreyi* Oberthür, 1922, *Lép. Comp.* 19: 157, pl. 535, figs. 4453, 4454.  
(Pl. 50, fig. 14)

Lectotype: ♀ 32 mm. "Maroc Harold Powell Chabat-el-Hamma 1er juin 1921"; "var *Borreyi*"; "coll. Ch. Oberthür."; a figure of the specimen numbered "4453".

ex Rothschild collection. Slide No. 455.

***Zygaena favonia* Frr. ssp. *cadillaci* Oberthür**

*Zygaena Cadillaci* Oberthür, 1921, *Lép. Comp.* 18 (1): 62, pl. T, fig. 2.  
*Zygaena Cadillaci* Oberthür, 1922, *Lép. Comp.* 19: 158, pl. 535, figs. 4450, 4451, 4452.  
(Pl. 50, fig. 15)

Type: ♀ 30 mm. "Maroc Forêt d'Azrou Moyen Atlas Harold Powell Juillet 1920"; "*Zygaena cadillaci*, Obthr"; "A servi de modèle pour la photographie de la Pl. T Vol. XVIII Etudes de Lépidoptérologie comparée."; a figure of the specimen numbered "4450"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 456.

***Zygaena favonia* Frr. ssp. *maroccensis* Reiss**

*Zygaena favonia* var. *maroccensis* Reiss, 1930, in Seitz, *Macrolep.* Suppl. 2: 13 (new name for *intermedia* Roths. [preoccupied]).  
*Zygaena favonia aurata* f. dimorph. *intermedia* Rothschild, 1917, *Novit. zool.* 24: 336.

(Pl. 50, fig. 17)

Type: ♂ 23 mm. "Tizi Gourza, Atlas, Marocco, up to 12,400'.vii. (Meade-Waldo)"; "*Z. favonia intermedia* Roths. Type"; "Original zur Abbildung des *Z. maroccensis* ♂ im Seitz, Suppl., Bd. 2, Tafel 11 1930. H. Reiss."

ex Rothschild collection. Slide No. 458.

***Zygaena favonia* Frr. ssp. *littoralis* Rothschild**

*Zygaena favonia littoralis* Rothschild, 1917, *Novit. zool.* 24: 336.  
*Zygaena loyselii ungemachi* Le Cerf, Roths. nec Le Cerf, ab. *cingulata* Reiss, 1943, *Z. wien. ent. Ges.* 28: 353. **syn. nov.**

[*littoralis*]

(Pl. 50, fig. 16)

Type: ♂ 28 mm. "Mogador Marokko"; "*Z. favonia littoralis* Roths. Type";



“Original zur Abbildung des *Z. littoralis* ♂ im Seitz, Suppl., Bd. 2, Tafel 11 1930. H. Reiss.”

ex Rothschild collection. Slide No. 457.

[cingulata]

(Pl. 57, fig. 8)

Lectotype: ♀ 30 mm. “Rabat, Maroc, 20.v. 1927. (Hartert & Young).”  
ex Rothschild collection. Slide No. 658.

Reiss applied the name *cingulata* to two specimens of *favonia* ssp. *littoralis* Roths. which had been incorrectly determined by Rothschild as *loyselis* ssp. *ungemachi* Le Cerf. The name *cingulata* can only be treated as a synonym of *favonia* ssp. *littoralis* Roths.

### *Zygaena sarpedon* Hübner

*Sphinx sarpedon* Hübner, 1790, *Beitr. zur Geschichte der Schmett.* 2 : 85, pl. 1c.

*Zygaena sarpedon* Hübn. ssp. *carmencita* Oberthür

*Zygaena Carmencita* Oberthür, 1910, *Lép. Comp.* 4 : 457.

(Pl. 50, fig. 18)

Lectotype: ♂ 29 mm. “Pyr. Orient. Vernet-les-Bains R. Oberthür VII, VIII, 1906”; “*carmencita* Obthr. ♂ Lepid. comparée, IV”; “*sarpedon*, Herrich-Schaeffer. *Zyg. Europ.* Tab. 7, no 51.”; “coll. Ch. Oberthür.”  
ex Rothschild collection. Slide No. 459.

*Zygaena sarpedon* Hübn. ssp. *carmencita* Obthr. ab. *flava* Oberthür

*Zygaena Sarpedon* ab. *flava* Oberthür, 1896, *Et. d'Ent.* 20 : 43, pl. 8, fig. 142.

(Pl. 50, fig. 20)

Type: ♂ 28 mm. “Vernet-l-Bains R. Oberthür Juillet 1885.”; “Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 142”; “coll. Ch. Oberthür.”  
ex Rothschild collection. Slide No. 460.

*Zygaena sarpedon* Hübn. ssp. *carmencita* Obthr. ab. *vernetensis* Oberthür

*Zygaena Sarpedon* var. *Vernetensis* Oberthür, 1884, *Et. d'Ent.* 8 : 28.

(Pl. 50, fig. 19)

Lectotype: ♂ 26 mm. “Vernet R. Oberthür”; “coll. Ch. Oberthür.”  
ex Rothschild collection. Slide No. 667.

The name *vernetensis* Obthr. has priority over *carmencita* Obthr., but the form can only be treated as an aberration, as although described as a “var.”, Oberthür stated that it was analagous with *rhadamanthus* Esp. ab. *kiesenwetterii* H.-S.

***Zygaena sarpedon* Hübn. ssp. *balearica* Boisduval**

*Zygaena balearica* Boisduval, 1829, *Mon. Zyg.*, p. 39, pl. 2, fig. 5.

I have been unable to find the type of *balearica* Boisduval, neither can I find any specimens answering to the description. It was described from the Balearic Islands and the South of Spain.

***Zygaena contaminei* Boisduval**

*Zygaena contaminei* Boisduval, 1834, *Icones*, 2 : 48, pl. 53, figs. 4, 5.

(Pl. 50, fig. 21)

Lectotype: ♂ 28 mm. "Contaminei"; "EX. MUSAEO Dris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 630, Pl. 58, figs. 5, 6.

The type was described from Barèges, Hautes Pyrénées.

***Zygaena contaminei* Boisduval ssp. (?ab.) *peñalabrica* Fernández**

*Zygaena peñalabrica* Fernández, 1929, *Mem. Soc. esp. Hist. nat.* 15 : 599, figs. 7, 8.

(Pl. 50, fig. 22)

Type: ♂ 29 mm. "Peña Labra 30-vii-27"; "Typus"; "Type"; "484"; "Zygaena contaminei Bsd. v. peñalabrica Frndz."

ex Rothschild collection. Slide No. 462.

There are slight differences in the genitalia of *peñalabrica* and *contaminei* which I believe to be subspecific. Further material is required to ascertain the subspecific status with certainty.

***Zygaena punctum* Ochsenheimer**

*Zygaena punctum* Ochsenheimer, 1808, *Schmett. Europa*, 2 : 36.

***Zygaena punctum* Ochs. ssp. *faitensis* Stauder**

*Zygaena punctum* ssp. *faitensis* Stauder, 1929, *Ent. Z.* 43 : 30.

(Pl. 50, fig. 23)

Type: ♂ 27 mm. "Italia mer. penins. Sorrento Mte. Falto 23.6. 1928 H. Stauder Collo f. 950 m."; "faitensis".

ex Rothschild collection. Slide No. 437.

The specimen was described from Mte. Faito, erroneously spelt Mte. Falto on the pin label.

***Zygaena punctum* Ochs. ssp. *faitensis* Stdr. ab. *pseudorubicundus* Stauder**

*Zygaena punctum* ssp. *faitensis* ab. *pseudorubicundus* Stauder, 1929, *Ent. Z.* 43 : 30.

(Pl. 50, fig. 24)

Type: ♀ 27 mm. "Italia mer. penins. Sorrento Mte. Falto 2.7. 1928 H. Stauder 950 m"; "Type 3796"; "pseudorubricundus".  
ex Rothschild collection. Slide No. 438.

The specimen was described from Mte. Faito, erroneously spelt Mte. Falto on the pin label.

***Zygaena zuleïma* Pierret**

*Zygaena Zuleïma* Pierret, 1837, *Ann. Soc. ent. Fr.* 6 : 22, pl. 1, fig. 8.

***Zygaena zuleïma* Pierr. ab. *flavescens* Rothschild**

*Zygaena zuleïma* ab. *flavescens* Rothschild, 1917, *Novit. zool.* 24 : 334.

(Pl. 50, fig. 25)

Type: ♂ 22 mm. "Djebel Ressay Tunis 9.3. 1912"; "328".  
ex Rothschild collection. Slide No. 445.

The type was erroneously described as a female.

***Zygaena erythrus* Hübner**

*Sphinx erythrus* Hübner, [July 1803]-[15th. November 1806], *Europ. Schmett.* 2, pl. 18, fig. 87.

***Zygaena erythrus* Hübn. ssp. *albipes* Verity**

*Zygaena erythra* [sic] var. *albipes* Verity, 1916, *Bull. Soc. ent. Fr.*, p. 289.

(Pl. 50, fig. 26)

Lectotype: ♂ 36 mm. "Sicilia Monotella 10/6 Fuge"; "Sicily, coll. E. Ragusa."; "Z. erythrus razza albipes Vrty"; "erythrus minos Bd".  
ex Rothschild collection. Slide No. 490.

***Zygaena erythrus* Hübn. ssp. *albipes* Vrty. ab. *erythraeformis* Verity**

*Zygaena rubicunda* [sic] var. *erythraeformis* Verity, 1916, *Bull. Soc. ent. Fr.*, p. 289.

(Pl. 50, fig. 27)

Lectotype: ♂ 27 mm. "Sicily, coll. E. Ragusa."; "Erythrus Hb."; "56"; "Z. rubicundus razza erythraeformis Vrty spec. typicum ♂"; "erythrus minos Bd (esengl. nano)".

ex Rothschild collection. Slide No. 491.

Until now the name *erythraeformis* has been used to describe an aberration of *rubicundus* Hübn. An examination of the type material showed that these specimens are small aberrant examples of *erythrus* Hübn.

***Zygaena diaphana* Staudinger**

*Zygaena pilosellae* var. *diaphana* Staudinger, 1887, *Berl. ent. Z.* 31 : 31.



***Zygaena diaphana* Stdgr. ssp. *sareptensis* Rebel ab. *citrina* Oberthür**

*Zygaena eythrus* ab. *citrina* Oberthür, 1910, *Lép. Comp.* 4 : 424.

(Pl. 50, fig. 28)

Type : ♀ 37 mm. " ab. *citrina* Ch. Obthr. ", " Ex. Musaeo A KUWERT 1894 " ;  
" coll. Ch. Oberthür. "

ex Rothschild collection. Slide No. 432.

An examination of the genitalia of the type showed that the specimen is conspecific with *diaphana* Stdgr. Although the specimen is without data I place it under ssp. *sareptensis* Rebel because of its size.

***Zygaena purpuralis* Brünnich**

*Sphinx purpuralis* Brünnich, 1763, Pontoppidan's *Danske Atlas*, 1 : 686, pl. 30.

***Zygaena purpuralis* Brünn. ab. *separata* Tutt**

*Anthrocera purpuralis* ab. *separata* Tutt, 1899, *Brit. Lep.* 1 : 434.

The type is not in the British Museum. It is not certain to which subspecies Tutt applied the name *separata* and I place it under the nominate race.

***Zygaena purpuralis* Brünn. ssp. *segontii* Tremewan**

*Zygaena purpuralis* ssp. *segontii* Tremewan, 1958, *Ent. Gaz.* 9 (4) : 188.

(Pl. 50, fig. 29)

Holotype : ♂ 28 mm. " Abersoch June 1902 C. F. Johnson. " ; " *Zygaena purpuralis* ssp. *segontii* ♂ Holotype sel. W. G. Tremewan, 1958. " ; " ex coll. Tutt. " ;  
ex Rothschild collection. Slide No. 439.

***Zygaena purpuralis* Brünn. ssp. *segontii* Trmn. ab. *obscura* Tutt**

*Anthrocera purpuralis* ab. *obscura* Tutt, 1899, *Brit. Lep.* 1 : 434.

(Pl. 50, fig. 30)

Tutt applied the name to three specimens which were taken in Caernarvonshire by Blagg in 1891 (Weir, *Proc. ent. Soc. Lond.*, p. xxxi). The specimen that I figure here is not the type. It has the following data : " Abersoch, N. Wales, June (beg.), 1908. F. C. Woodforde. "

ex Bankes collection. Slide No. 565.

***Zygaena purpuralis* Brünn. ssp. *hibernica* Reiss ab. *lutescens* Tutt**

*Anthrocera purpuralis* ab. *lutescens* Tutt, 1899, *Brit. Lep.* 1 : 434.

Tutt applied the name *lutescens* to a specimen in the Allen collection which was later sold at Steven's. The specimen, which I have been unable to trace, was taken at Galway according to Tutt (*vide Ent. Rec.* 5 : 217).

***Zygaena purpuralis* Brünn. ssp. *hibernica* Reiss f. loc. *sabulosa* Tremewan**

*Zygaena purpuralis* ssp. *hibernica* Reiss f. loc. *sabulosa* Tremewan, 1960, *Ent. Gaz.* 11 (4) : 186.

(Pl. 50, fig. 31)

Holotype: ♂ 30 mm. "Ballyvaughan co. Clare Ireland. vi. 1913."; "*Z. purpuralis* ssp. *hibernica* Reiss f. loc. *sabulosa* Tremewan. Holotype ♂ det. W. G. Tremewan, 1959."

ex Rothschild collection. Slide No. 587.

***Zygaena purpuralis* Brünn. ssp. *heringi* Zeller**

*Zygaena Heringi* Zeller, 1844, *Stettin. ent. Ztg.* 5 : 42.

(Pl. 50, fig. 32)

Lectotype: ♂ 29 mm. "Stettin Hering 10.41"; "*Zyg. Heringi* Z. n.sp? ent. *Ztg.*".

ex Zeller collection. Slide No. 92.

The original designation of the lectotype was published in 1958, *Ent. Gaz.* 9 (4) : 184.

***Zygaena purpuralis* Brünn. ssp. *lathyri* Boisduval**

*Zygaena lathyri* Boisduval, 1829, *Mon. Zyg.*, p. 32, pl. 2, fig. 1.

I consider *lathyri* Boisd. to be the subspecies of *purpuralis* Brünn. from Ragusa (Dalmatia). I have been unable to find the type.

***Zygaena purpuralis* Brünn. ssp. *hellena* Burgeff**

*Zygaena purpuralis* var. *hellena* Burgeff, 1926, *Mitt. münchen. ent. Ges.* 16 : 14 (new name for *graeca* Tutt [preoccupied]).

*Zygaena purpuralis* var. *graeca* Tutt, 1895, *Ent. Rec.* 6 : 273.

(Pl. 51, fig. 1)

Lectotype: ♂ 33 mm. "Minos v. *graeca* Parnass Stdg lit. 5/2 69."

ex Zeller collection. Slide No. 433.

***Zygaena purpuralis* Brünn. ssp. *pseudodiaphana* Tremewan**

*Zygaena purpuralis* ssp. *pseudodiaphana* Tremewan, 1958, *Ent. Gaz.* 9 (4) : 184.

(Pl. 51, fig. 2)

Holotype: ♀ 31 mm. "Karacabey Brussa, As. min. 930 V/2 Ajtai"; "*Zygaena purpuralis* ssp. *pseudodiaphana* Holotype ♀ sel. W. G. Tremewan, 1958."

ex Rothschild collection. Slide No. 153.

Subg. *AGRUMENIA* Hübner*Zygaena cocandica* Erschoff

*Zygaena cocandica* Erschoff, 1874, in Fedtshenko, *Lep. Turkestan*, p. 28, pl. 2, fig. 22.

*Zygaena cocandica* Ersch. ssp. *pamira* Sheljuzhko

*Zygaena cocandica pamira* Sheljuzhko, 1919, *N. Beitr. syst. Insektenk.* 1 : 130.

*Zygaena avinoffi* Hampson, 1919, *Trans. ent. Soc. Lond.*, p. 433.

[avinoffi]

(Pl. 51, fig. 3)

Type: ♂ 26 mm. "W. Turkestan Pamir. Koitesek 4000 m. 19. VI. 1909."; "A. Avinoff. 1913-191"; "Zygaena avinoffi Hampsn. type ♂".

Slide No. 501.

*Zygaena afghana* Moore

*Zygaena afghana* Moore, 1858/9, *Cat. Lep. Ind. Mus.* 2 : 286, pl. 7a, fig. 1.

(Pl. 51, fig. 4)

Type: ♀ 28 mm. "Griffith"; "Ind. Mus. 79,64."; "Zygaena afghana Moore Type".

Slide No. 271, Pl. 64, figs. 5, 6.

Described from Afghanistan. Hampson (1892, *Fauna Brit. India*, 1 : 231) gives Quetta as a further locality.

*Zygaena rothschildi* Reiss

*Zygaena rothschildi* Reiss, 1930, in Seitz, *Macrolep.*, Suppl., 2 : 22.

(Pl. 51, fig. 5)

Type: ♂ 26 mm. "R. Yagnob"; "Mtes Hissar."; "Ulaxs Capa 24. vii. 92"; "Coll. Groum-Grschimailo."; "Original zur Abbildung des *Z. rothschildi* ♂ in Seitz, Suppl., Bd. 2, Tafel 2i 1930. H. Reiss."; a label in Rothschild's hand: "*Z. haematina* Koll."

ex Rothschild collection. Slide No. 415, Pl. 59, figs. 1, 2.

*Zygaena rothschildi* Reiss ab. *latecincta* Reiss & Tremewan

*Zygaena rothschildi* ab. *latecincta* Reiss & Tremewan, 1960, *Bull. Brit. Mus. (nat. Hist.) Ent.* 9 (10) : 462, pl. 22, fig. 10.

(Pl. 51, fig. 6)

Holotype: ♂ 27 mm. "Ulaxs capa 24. vii. 92"; "Mtes Hissar."; "R. Yagnob."; "Coll. Groum-Grschimailo."; "H. Type ♂ *rothschildi* ab. *latecincta* Reiss et Trem. 1959 H. Reiss."

ex Rothschild collection. Slide No. 371.



*Zygaena olivieri* Boisduval

*Zygaena olivieri* Boisduval, 1829, *Mon. Zyg.*, p. 98, pl. 6, fig. 4.

(Pl. 51, fig. 7)

Lectotype: ♀ 27 mm. "olivieri. B. Cauc."; "EX. MUSAE O Dris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 500, Pl. 64, figs. 3, 4.

The specimen is labelled "Cauc." but I believe this to be false as Boisduval described the species from Syria. The lectotype does not agree with the race from the Caucasus, but agrees with the subspecies from Beyrut, Syria, which is considered to be the nominate race.

*Zygaena optima* Reiss

*Zygaena optima* Reiss, 1939, *Ent. Z.* 53 : 118 (new name for *nobilis* Reiss [preoccupied]).

*Zygaena nobilis* Reiss, 1933, *Ent. Rdsch.* 50 : 144, figs.

*Zygaena optima* Reiss ab. *tricolor* Reiss

*Zygaena nobilis* ab. *tricolor* Reiss, 1935, *Int. ent. Z.* 28 : 542.

(Pl. 51, fig. 8)

Type: ♀ 29 mm. "Cauc. c. or. Daghestan Petrovsk 3000 m. Juni"; "Type ♀ *nobilis* Reiss ab. *tricolor* Reiss 1934 H. Reiss."

ex Rothschild collection. Slide No. 504.

According to Holik & Sheljuzhko, (1956, *Mitt. münchen ent. Ges.* 46 : 106) the specimen originates from Berg Tarki, which is approximately 1000 m. in height, not 3000 m. as stated on the pin label.

*Zygaena fraxini* Ménétries

*Zygaena fraxini* Ménétries, 1832, *Cat. Rais.*, p. 260.

*Zygaena fraxini* Mén. ssp. *oribasus* Herrich-Schäffer

*Zygaena Oribasus* Herrich-Schäffer, 1844, *Schmett. Europa*, 2, pl. 4, figs. 31-34.

*Zygaena rognada* Boisduval, 1848, *Bull. Soc. ent. Fr.* (2) 6 : xxx.

[rognada]

(Pl. 51, fig. 9)

Type: ♀ 31 mm. "Rognada. K. Russ. m."; "EX. MUSAE O Dris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 503.

Described from Odessa.

***Zygaena felix*** Oberthür

*Zygaena Faustina* ? Ochs. (*Felix* Obr. in Mus) Oberthür, 1876, *Et. d'Ent.* 1 : 36.

(Pl. 51, fig. 10)

Neotype : ♂ 25 mm. "Sebdou 274 18-5-81" ; "Sebdou (Oran) Dr Codet 1880-1882" ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 506, Pl. 59, figs. 3, 4.

In 1887, Staudinger (*Berl. ent. Z.* 31 : 38) relegated the type race to the neighbourhood of Sebdou, because Oberthür had described the unbelted, as well as the belted form. We should therefore take the population from Sebdou as the nominate race. In 1888, Oberthür mentioned Magenta, Sebdou and Lambessa as the locality for *felix*.

As no syntype material can be found in the Oberthür collection I designate the specimen with the data quoted above as a neotype.

***Zygaena excelsa*** Rothschild

*Zygaena marcouna* [sic] *excelsa* Rothschild, 1917, *Novit. zool.* 24 : 340.

(Pl. 51, fig. 11)

Type : ♂ 29 mm. "Djebel Mekter, 1600-1800 m., nr. Aïn Sefra, 10. May 1913 (W. R. & E. H.)" ; "*Zygaena marcouna excelsa* Rothsch. Type".

ex Rothschild collection. Slide No. 516, Pl. 59, figs. 5, 6.

***Zygaena marcuna*** Oberthür

*Zygaena Marcuna* Stdgr. (in litteris) Oberthür, 1888, *Et. d'Ent.* 12 : 27.

*Zygaena marcouna auctorum*.

(Pl. 51, fig. 12)

Lectotype : ♂ 28 mm. "Marcuna Stgr. Lambèze Staud. 1887 Marcouna, mi mai" ; "4/5" ; "Etud. d'Entom. XIIIe liv'on pl. 7. fig. 58.", on the reverse side of the latter label is a photograph of the specimen ; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 517, Pl. 60, figs. 1, 2.

The original designation of the lectotype was published in 1960, *vide Bull. Brit. Mus. (nat. Hist.) Ent.* 9 (10) : 463.

***Zygaena alluaudi*** Oberthür

*Zygaena Alluaudi* Oberthür, 1922, *Lép. Comp.* 19 : 159, pl. 545, figs. 4583, 4584.

(Pl. 51, fig. 13)

Lectotype : ♂ 27 mm. "Bou Angher 2000 m Alluaud 82" ; "*Zygaena alluaudi* n.sp." ; "coll. Ch. Oberthür." Also a figure of the specimen numbered "4584". ex Rothschild collection. Slide No. 515, Pl. 60, figs. 3, 4.

The original designation of the lectotype was published in 1960, *vide Bull. Brit. Mus. (nat. Hist.) Ent.* 9 (10) : 463.

*Zygaena hilaris* Ochseneheimer*Zygaena hilaris* Ochseneheimer, 1808, *Schmett. Europa*, 2 : 101.*Zygaena hilaris* Ochs. ssp. *galliae* Oberthür*Zygaena hilaris-galliae* Oberthür, 1910, *Lép. Comp.* 4 : 602 (with reference to *Et. d'Ent.* 12, pl. 7, figs. 48a, b, c).

(Pl. 51, fig. 14)

Lectotype : ♂ 27 mm. " Pyrénées Orientales Env. de Vernet-l-B. René Oberthür Eté 1886." ; " à servi de modèle à D'Apréval 1887 " ; " coll. Ch. Oberthür." ex Rothschild collection. Slide No. 499.

*Zygaena hilaris* Ochs. ssp. *galliae* Obthr. ab. *bicolor* Oberthür*Zygaena hilaris* ab. *bicolor* Oberthür, 1896, *Et. d'Ent.* 20, pl. 7, fig. 130.

(Pl. 51, fig. 15)

Type : ♀ 30 mm. " Pyrénées Orientales Vernet-les-Bains R. Oberthür Eté 1889 " ; " Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No 130 " ; " coll. Ch. Oberthür." ex Rothschild collection. Slide No. 497.

*Zygaena hilaris* Ochs. ssp. *galliae* Obthr. ab. *unicolor* Oberthür*Zygaena hilaris* ab. *unicolor* Oberthür, 1896, *Et. d'Ent.* 20, pl. 7, fig. 131.

(Pl. 51, fig. 16)

Type : ♀ 29 mm. " Pyrénées Orientales Vernet-les-Bains R. Oberthür Eté 1889 " ; " Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No. 131 " ; " coll. Ch. Oberthür." ex Rothschild collection. Slide No. 498.

*Zygaena hilaris* Ochs. ssp. *galliae* Obthr. ab. *confluens* Oberthür*Zygaena hilaris* ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 7, fig. 129.

(Pl. 51, fig. 17)

Type : ♀ 27 mm. " Pyrénées Orientales Env. de Vernet l. B. Eté 1887 Ch. &amp; R. Oberthür." ; " Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No. 129 " ; " coll. Ch. Oberthür." ex Rothschild collection. Slide No. 496.

*Zygaena hilaris* Ochs. ssp. *ononidis* Mill. ab. *tricolor* Oberthür*Zygaena hilaris-tricolor* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 180.



(Pl. 51, fig. 18)

Type : ♀ 27 mm. "Moulinet vii-06 hilaris ab."; "-tricolor type"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 180"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 492.

*Zygaena hilaris* Ochs. ssp. *ononidis* Mill. ab. *foulquieri* Oberthür

*Zygaena hilaris-Foulquieri* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 179.

(Pl. 51, fig. 19)

Type : ♂ 26 mm. "Saint-Pons près Gémenos (B. du. Rh) 12 Juillet 1903 Foulquier"; "Foulquieri type"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 179"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 494.

*Zygaena hilaris* Ochs. ssp. *ononidis* Mill. ab. *aurantiaca* Oberthür

*Zygaena hilaris* ab. *aurantiaca* Oberthür, 1910, *Lép. Comp.* 4 : 603.

(Pl. 51, fig. 20)

Type : ♂ 27 mm. "Moulinet VII-06 Hilaris ab. flava"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 495.

This specimen was labelled "ab. flava" by the collector.

*Zygaena hilaris* Ochs. ssp. *escorialensis* Oberthür

*Zygaena hilaris* var. *Escorialensis* Oberthür, 1884, *Et. d'Ent.* 8 : 33.

(Pl. 51, fig. 21)

Lectotype : ♀ 25 mm. "Escorial (Espagne) L. Bleuse 29, 30/7 1879"; "var. Escorialensis Obtr."; "Vu par Staudinger Catalogue 1900"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 493.

*Zygaena algira* Duponchel

*Zygaena algira* Duponchel, 1835, *Hist. des Lép.*, Suppl. 2 : 86, pl. 7, fig. 6.

*Zygaena Bachagha* Oberthür, 1916, *Lép. Comp.*, 12 : 226.

(Pl. 51, fig. 22)

Duponchel's description does not agree with his figure, and Oberthür took the figure as valid and not the description. Oberthür then gave the name *bachagha* to the insect figured by Herrich-Schäffer under the name of *algira*, which is also the insect described by Duponchel. However, Duponchel's description is valid, and the name *bachagha* is a synonym. This has already been accepted by Rothschild (1917, *Novit. zool.* 24 : 338) and Reiss (1930, Seitz, *Macrolep.*, Suppl. 2 : 25).

The specimen I figure here is a male, and one that Oberthür illustrated. It has the following data: "Alger"; "coll. Ch. Oberthür."; and a photograph of the specimen, on the reverse side of which is written "Etud. d'Entom. XIIIe liv'on pl. 7. fig. 59".

ex Rothschild collection. Slide No. 514, Pl. 60, figs. 5, 6.

***Zygaena algira* Dup. ab. *concolor* Oberthür**

*Zygaena Algira* ab. *Concolor* Oberthür, 1881, *Et. d'Ent.* 6 : 68, pl. 2, fig. 4.

The name *concolor* was applied by Oberthür to an aberration of *algira* in the collection of G. Allard, which is now in the Pasteur Institut, Paris. There are no examples of this aberration in the British Museum collection which I could figure here.

***Zygaena algira* Dup. ab. *bicolor* Holl**

*Zygaena algira* ab. *bicolor* Holl, 1912, *Bull. Soc. Hist. nat. Afr. N.* 4 (6) : 119.

(Pl. 51, fig. 23)

Type: ♀ 27 mm. "Bainen Alger 19.7. 04"; "Type décrit Bul. S.H.N. de l'Afr. du Nord No. 6 du 15.6. 12 page 119."; "Collection Capt. HOLL.".

ex Rothschild collection. Slide No. 512.

***Zygaena algira* Dup. ab. *aurantiaca* Holl**

*Zygaena algira* ab. *aurantiaca* Holl, 1912, *Bull. Soc. Hist. nat. Afr. N.* 4 (6) : 119.

(Pl. 51, fig. 24)

Type: ♀ 27 mm. "Bainen Alger. 10.6. 04"; "Type décrit Bull. S.H.N. de l'Afr. du Nord No. 6 du 15.6. 12 page 119"; "Collection Capt. HOLL.".

ex Rothschild collection. Slide No. 513.

***Zygaena fausta* Linnaeus**

*Sphinx fausta* Linnaeus, 1767, *Syst. Nat., ed. XII*, p. 807.

***Zygaena fausta* L. ssp. *apocrypha* Le Charles ab. *tricolor* Oberthür**

*Zygaena fausta* ab. *tricolor* Oberthür, 1904, *Lép. Comp.* 1 : 52, pl. 3, figs. 28, 29.

(Pl. 51, fig. 25)

Lectotype: ♂ 26 mm. "Basses-Alpes Digne A. Coulet 1900"; "Zygaena fausta-tricolor Ch. Obthr. Lépid. comparée, Pl. III No. 28."; "coll. Ch. Oberthür.".

ex Rothschild collection. Slide No. 510.

***Zygaena fausta* L. ssp. *agilis* Reiss ab. *brunnea* Oberthür**

*Zygaena fausta-brunnea* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 178.

(Pl. 51, fig. 26)

Type : ♂ 23 mm. "fausta thuringen."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 178"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 511.

"thuringen" on the pin label probably refers to Thüringen in Germany.

***Zygaena fausta* L. ssp. *junceae* Oberthür**

*Zygaena fausta* var. *junceae* (Millière) Oberthür, 1884, *Et. d'Ent.* 8 : 32.

(Pl. 51, fig. 27)

Lectotype : ♂ 25 mm. "Vernet-l-Bains Pyrénées Orientales Ch. Oberthür Août 1880"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 509.

Apparently *junceae* Mill. was a manuscript name until published by Oberthür, who, in addition to quoting Vernet-les-Bains, gave Hyères as another locality. One of the two specimens from the Guenée collection mentioned by Oberthür, and now in the British Museum, is labelled Hyères, but I have not selected this specimen as the lectotype as the population from Southern France is considered to be the nominate race. I designate as lectotype a specimen from Vernet-les-Bains; if I had selected the Guenée specimen, *junceae* Obthr. would have become a synonym of *fausta* L. and the Pyrenean race would be without a name.

***Zygaena fausta* L. ssp. *fortunata* Ramb. ab. *dupuyi* Oberthür**

*Zygaena fausta-Dupuyi* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 45.

(Pl. 51, fig. 28)

Type : ♀ 26 mm. "Charente Angoulême R. Oberthür 4-5. VI. 1906."; "*Zygaena fausta-Dupuyi* Obthr. type"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII fig. 109"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 508.

***Zygaena fausta* L. ssp. *fortunata* Ramb. ab. *melusina* Oberthür**

*Zygaena fausta-melusina* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 108.

(Pl. 51, fig. 29)

Type : ♀ 24 mm. "Charente Angoulême R. Oberthür 4-5. VI. 1906."; "*Zygaena fausta-melusina* Obthr. type"; "A servi de Modèle à J. Culot de Genève, pour

la IIIe livraison de Lépidoptérogologie comparée 1908-1909 Pl. XXII fig. 108 ” ;  
 “ coll. Ch. Oberthür.”  
 ex Rothschild collection. Slide No. 507.

***Zygaena orana* Duponchel**

*Zygaena orana* Duponchel, 1835, *Hist. des Léép.*, Suppl. 2 : 145, pl. 12, fig. 8.

***Zygaena orana* Dup. ab. *oberthüri* Bethune-Baker**

*Zygaena Oberthüri* Bethune-Baker, 1888, *Trans. ent. Soc. Lond.*, p. 118.

(Pl. 51, fig. 30)

Type: ♀ 23 mm. “ Sebdou Algeria Pech 1886 ” ; “ Oberthuri ” ; “ Type ” ;  
 “ 50 ” ; “ G. T. B.-Baker Coll. Brit. Mus. 1927-360.”.

ex Bethune-Baker collection. Slide No. 505.

Although described as a species, an examination of the genitalia showed the specimen to be conspecific with *orana* Dup.

***Zygaena orana* Dup. ab. *barbara* Herrich-Schäffer**

*Zygaena Barbara* Herrich-Schäffer, 1844, *Schmett. Europa*, 2, pl. 4, figs. 29, 30.

*Zygaena Barbara* Herrich-Schäffer, 1846, *Schmett. Europa*, 2 : 47.

*Zygaena Nedroma* (Austaut) Oberthür, 1881, *Et. d'Ent.* 6 : 68, pl. 3, fig. 3.

[nedroma]

(Pl. 51, fig. 31)

Type: ♀ 25 mm. “ *Zygaena* . . . *Nedroma* Prov. d'Oran (Austaut) ” ; “ Typi-  
 cum Specimen ”, the latter label is printed in red type. “ coll. Ch. Oberthür.”  
 ex Rothschild collection. Slide No. 532.

***Zygaena orana* Dup. ssp. *limitans* Rothschild**

*Zygaena carniolica limitans* Rothschild, 1917, *Novit. zool.* 24 : 341.

(Pl. 51, fig. 32)

Type: ♂ 22 mm. “ Bône Constantine 9 Mai 1911 ” ; “ *Z. orana limitans* Rothsch.  
 Type ”.

ex Rothschild collection. Slide No. 531.

***Zygaena orana* Dup. ssp. *lahayei* Oberthür**

*Zygaena orana-Lahayei* Oberthür, 1890, *Et. d'Ent.* 13 : 24, pl. 7, fig. 53.

(Pl. 51, fig. 33)

Type: ♂ 24 mm. “ Algérie Géryville 10-26 Mai 1886 Lt. Lahaye.” ; “ Etud.



d'Entom. XIIIe liv'on pl 7. no 53", on the reverse side of the latter label is a figure of the specimen; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 519.

***Zygaena orana* Dup. ssp. *lahayei* Obthr. ab. *powelli* Oberthür**

*Zygaena orana* ab. *Powelli* Oberthür, 1911, *Lép. Comp.* 5 (1) : 320, pl. 63, fig. 592.

(Pl. 51, fig. 34)

Type: ♂ 23 mm. "Algérie Région de Géryville Mai 1910 Harold Powell"; "Zygaena orana Lépid. comparée Vol. V. pl. LXIII fig. 592 Ab. Powell. Obthr."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 529.

***Zygaena orana* Dup. ssp. *allardi* Oberthür**

*Zygaena Allardi* Oberthür, 1878, *Et. d'Ent.* 3 : 41 (Suppl.), pl. 5, fig. 5.

(Pl. 51, fig. 35)

Type: ♂ 23 mm. "Marcouna (Allard)"; "Zygaena allardi, Oberthür (Etudes d'Entomol. IIIe liv'on, pl. v, fig. 5. pages 41, 42—specimen typicum—"; "Vu par Staudinger Catalogue 1900"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 518.

An examination of the genitalia showed *allardi* Obthr. to be conspecific with *orana* Dup.

***Zygaena orana* Dup. ssp. *contristans* Oberthür**

*Zygaena orana* var. *contristans* Oberthür, 1922, *Lép. Comp.* 19 : 158, pl. 535, fig. 4456.

(Pl. 51, fig. 36)

Lectotype: ♀ 22 mm. "Maroc Mrassine H. Powel Avril 1921", there is only one "1" in "Powel" on the pin label, apparently due to an error of the printer.

"Zygaena orana contristans Obthr."; "coll. Ch. Oberthür."; a figure of the specimen with the number "4456".

ex Rothschild collection. Slide No. 530.

***Zygaena orana* Dup. ssp. *hajebensis* Reiss & Tremewan**

*Zygaena orana* ssp. *hajebensis* Reiss & Tremewan, 1960, *Bull. Brit. Mus. (nat. Hist.) Ent.* 9 (10) : 464, pl. 22, figs. 11, 12.

(Pl. 51, fig. 37)

Holotype: ♂ 23 mm. "El Hajeb, W. slopes of Middle Atlas, Maroc, 17.iv. 1929. (E. Hartert)."; "H. Type ♂ hajebensis Reiss et Tremewan 1959 H. Reiss".

ex Rothschild collection. Slide No. 528.

***Zygaena youngi* Rothschild**

*Zygaena youngi* Rothschild, 1925, *Bull. Soc. Sci. nat. Maroc.* 5 : 338.

*Zygaena orana media* Rothschild, 1925, *Bull. Soc. Sci. nat. Maroc.* 5 : 338.

*Zygaena orana* var. *rothschildiana* Reiss, 1930, in Seitz, *Macrolep.*, Suppl. 2 : 26 (new name for *media* Roths. [preoccupied]).

[*youngi*]

(Pl. 51, fig. 38)

Type : ♂ 23 mm. "Above Azrou, Middle Atlas, 1800 m. 1.vi. 25. (Hartert & Young)."; "*Zygaena youngi* Rothschild. Type"; "Original zur Abbildung des *Z. youngi* ♂ im Seitz, Suppl., Bd. 2, Tafel 3a 1930. H. Reiss."

ex Rothschild collection. Slide No. 340, Pl. 61, figs. 1, 2.

[*media*]

(Pl. 51, fig. 39)

Type : ♂ 22 mm. "Lake Sidi Ali, Middle Atlas, 2250 m. 8.VI. 25. (Hartert & Young)."; "*Z. orana media* Rothschild. Type".

ex Rothschild collection. Slide No. 535.

A study of the genitalia of the type of *media* showed it to be conspecific with *youngi* Roths. (vide *Bull. Brit. Mus. (nat. Hist.) Ent.* 9 (10) : 464).

***Zygaena harterti* Rothschild**

*Zygaena harterti* Rothschild, 1925, *Bull. Soc. Sci. nat. Maroc.* 5 : 338.

(Pl. 52, fig. 1)

Type : ♂ 26 mm. "Azrou, Middle Atlas, 1800 m. 29.V. 25. (Hartert & Young)."; "*Zygaena harterti* Rothschild. Type"; "Original zur Abbildung des *Z. harterti* ♂ im Seitz, Suppl., Bd. 2, Tafel 3a 1930. H. Reiss."

ex Rothschild collection. Slide No. 339, Pl. 61, figs. 3, 4.

***Zygaena maroccana* Rothschild**

*Zygaena carniolica maroccana* Rothschild, 1917, *Novit. zool.* 24 : 342.

(Pl. 52, fig. 2)

Type : ♀ 31 mm. "Mogador Marokko"; "*Z. carniolica maroccana* Rothschild. Type"; "Original zur Abbildung des *Z. maroccana* ♀ im Seitz, Suppl., Bd. 2, Tafel 20 1930. H. Reiss."

ex Rothschild collection. Slide No. 407, Pl. 64, fig. 7.

The genitalia were badly damaged before dissection, and only the ostium remains.

***Zygaena occitanica* de Villers**

*Sphinx Occitanica* de Villers, 1789, *Carol. Linn. Entomol.* 2 : 114, pl. 4, fig. 21.

***Zygaena occitanica*** de Vill. ab. ***bicolor*** Oberthür

*Zygaena carniolica-bicolor* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 114.

(Pl. 52, fig. 3)

Type: ♂ 27 mm. "Basses-Alpes Env. de Digne Juillet 1904 Victor Cotte"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII fig. 114"; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 537.

An examination of the genitalia showed this specimen to be an aberration of *occitanica* de Vill.

***Zygaena carniolica*** Scopoli

*Sphinx Carniolica* Scopoli, 1763, *Ent. carniol.*, p. 189.

***Zygaena carniolica*** Scop. ssp. ***diniensis*** H.-S. ab. ***melusina*** Oberthür

*Zygaena carniolica-melusina* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 119.

(Pl. 52, fig. 4)

Lectotype: ♀ 27 mm. "Basses-Alpes Env. de Digne Victor Cotte 1904"; "Z. carniolica-melusina, Obthr. type 119"; "A servi de Modèle à J. Culot de Genève, pour le IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII fig. 119"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 542.

***Zygaena carniolica*** Scop. ssp. ***diniensis*** H.-S. ab. ***dupuyi*** Oberthür

*Zygaena carniolica-Dupuyi* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 110.

(Pl. 52, fig. 5)

Type: ♀ 29 mm. "Chasseurs de Digne Juillet 1897"; "Zygaena carniolica Dupuyi, Obthr. type."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII fig. 110"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 541.

***Zygaena carniolica*** Scop. ssp. ***modesta*** Bgff. ab. ***detschi*** Oberthür

*Zygaena carniolica-Detschi* Oberthür, 1910, *Lép. Comp.* 4: 636, pl. 51, fig. 442.

(Pl. 52, fig. 6)

Type: ♂ 29 mm. "Stuttgart (Alois Detsch) fin Juillet 1909"; "ab. Detschi, Obthr. Lépidopt. compar. Pl. LI. Vol. IV.", on the reverse side of the latter label is a figure of the specimen with the number "442"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 540.

***Zygaena carniolica* Scop. ssp. *valesiae* Bgff. ab. *amoena* Staudinger***Zygaena carniolica* ab. *amoena* Staudinger, 1887, *Berl. ent. Z.* 31 : 39.*Zygaena carniolica* ab. *tricolor* Oberthür, 1904, *Lép. Comp.* 1 : 52, pl. 3, fig. 30.

[tricolor]

(Pl. 52, fig. 7)

Type: ♀ 30 mm. "Juillet, Martigny"; "Reçu de Wullschlegel de Martigny (Valais)"; "*Zygaena carniolica* ab. *tricolor*, Obthr. Lépid. comparée, pl. III fig. 30"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 539.

***Zygaena carniolica* Scop. ssp. *valesiae* Bgff. ab. *weileri-tricolor* Oberthür***Zygaena Carniolica* ab. *Weileri tricolor*, Oberthür, 1904, *Lép. Comp.* 1 : 52, pl. 3, fig. 32.

(Pl. 52, fig. 8)

Type: ♂ 28 mm. "Juillet/Martigny"; "Reçu de Wullschlegel de Martigny (Valais)"; "*Zygaena carniolica* transitus inter *tricolor* & *Weileri*—Lépid. comp. pl. III. fig. 32"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 703.

***Zygaena carniolica* Scop. ssp. *onobrychis* Esp. ab. *totirubra* Seitz***Zygaena carniolica* ab. *totirubra* Seitz, 1910, *Macrolep.* 2 : 30, pl. 8f.

(Pl. 52, fig. 9)

Type: ♂ 25 mm. "Hungary"; "478"; "*totirubra* Seitz (ab.)"; "type Seitz".

ex Rothschild collection. Slide No. 536.

***Zygaena carniolica* Scop. ssp. *onobrychis* Esp. ab. *asymetrica* Oberthür***Zygaena carniolica-asymetrica* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 118.

(Pl. 52, fig. 10)

Type: ♀ 28 mm. "Ofen"; "466"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII fig. 118"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 538.

***Zygaena carniolica* Scop. ssp. *hedysari* Hübn. ab. *apenina* Oberthür***Zygaena Carniolica* ab. *Apenina* Oberthür, 1910, *Lép. Comp.* 4 : 633 (with reference to *Et. d'Ent.* 20, pl. 7, fig. 114).

The type figured in *Etudes d'Entomologie*, 20, pl. 7, fig. 114 cannot be found and I assume that it is lost. The aberration is transitional to ab. *apennina* Turati.



However, the specimen figured pl. 7, fig. 117, is in the Oberthür collection and is ssp. *hedysari* Hübn. ab. *pseudoberolinensis* Burgeff. Both specimens were described from Piedmont.

***Zygaena carniolica* Scop. ssp. *siciliana* Reiss**

*Zygaena carniolica* var. *siciliana* Reiss, 1921, *Int. ent. Z.* 15 : 39.

*Anthocere* [sic] *carniolica sicilica* Ragusa, 1924, *Boll. Lab. Zool. Portici.* 18 : 94.

[sicilica]

(Pl. 52, fig. 11)

Lectotype : ♂ 28 mm. "Prov. Messina. Local. . . . Data 25.6. 1919. coll. E. Ragusa"; "Sicily, coll. E. Ragusa."  
ex Rothschild collection. Slide No. 672.

***Zygaena carniolica* Scop. ssp. *praestans* Oberthür**

*Zygaena carniolica* race *praestans* Oberthür, 1910, *Lép. Comp.* 4 : 637.

(Pl. 52, fig. 12)

Lectotype : ♀ 32 mm. "Syrie, Akbès Ch. Delagrange Eté 1890"; "praestans Obthr. Lépid. comparée IV-1910."; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No. 116"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 543.

***Zygaena exulans* Reiner & Hohenwarth**

*Sphinx exulans* Reiner & Hohenwarth, 1792, *Botan. Reisen*, p. 265, pl. 6, fig. 2.

***Zygaena exulans* R. & H. ab. *pallida* Tutt**

*Zygaena exulans* ab. *pallida* Tutt, 1897, *Ent. Rec.* 9 : 14.

(Pl. 52, fig. 13)

The type is not in the British Museum. The specimen I figure is a female and is labelled "Grausou, 1895. ex coll. Tutt."; "ab. pallida, Tutt. (cotypes) N. Hist. Brit. Lep. I. p. 449".  
ex Rothschild collection. Slide No. 665.

This specimen could possibly be from syntype material, but Tutt did not mention Grauson, erroneously spelt "Grausou" on the pin label, in his description.

***Zygaena exulans* R. & H. ab. *clara* Tutt**

*Zygaena exulans* ab. *clara* Tutt, 1894, *Ent. Rec.* 5 : 266.

The type is not in the British Museum. The aberration, which was described from the Swiss Alps, is well scaled and brightly coloured in both sexes; the females are without the whitish markings on the thorax and veins of the fore wings.

***Zygaena exulans* R. & H. ssp. *subochracea* White***Zygaena exulans* var. *subochracea* White, 1872, *Scot. Nat.* 1: 174.*Zygaena exulans* var. *rubbedaria* Tutt, 1894, *Proc. ent. Soc. Lond.*, p. xxvii.

[subochracea]

(Pl. 52, fig. 14)

Lectotype: ♂ 25 mm. "Braemar, 1871 ex coll. Tutt."; "type from F. B. White (Braemar 1871)".

ex Rothschild collection. Slide No. 440.

According to the data, this specimen was sent to Tutt by Buchanan White, and I have no hesitation in taking it as an original specimen.

[rubbedaria]

This name was applied by Tutt to subdiaphanous specimens of the Scottish race *subochracea* White, which in my opinion were worn; consequently I treat it as a synonym.

***Zygaena exulans* R. & H. ssp. *altaratensis* Le Charles ab. *striata* Tutt***Zygaena exulans* ab. *striata* Tutt, 1896, *Proc. ent. Soc. Lond.*, p. xli.*Zygaena exulans* ab. *confluens* Oberthür, 1910, *Léop. Comp.* 4: 482.

[striata]

(Pl. 52, fig. 15)

Lectotype: ♀ 27 mm. "Le Lautaret, 1-6. Aug. 1896. ex coll. Tutt."; "Extreme form ab. *striata*".

ex Rothschild collection. Slide No. 441.

[confluens]

(Pl. 52, fig. 16)

Type: ♀ 30 mm. "Ex. Musaeo Ach. Guenée"; "coll. Ch. Oberthür".

ex Rothschild collection. Slide No. 656.

In his description, Oberthür stated that the specimen came from the Simplon.

***Zygaena exulans* R. & H. ssp. *altaratensis* Le Charles ab. *pulchra* Tutt***Anthrocera exulans* ab. *pulchra* Tutt, 1899, *Brit. Lep.* 1: 448.

(Pl. 52, fig. 17)

Type: ♀ 31 mm. "Le Lautaret, 1-6. Aug. 1896. ex coll. Tutt."; "ab. *pulchra* Tutt N. Hist Brit Lep. 1.448 type. unique Le Lautaret Aug 6. 96".

ex Rothschild collection. Slide No. 442.

***Zygaena exulans* R. & H. ssp. *altaratensis* Le Charles ab. *minor* Tutt**

*Anthroceira exulans* ab. *minor* Tutt, 1899, *Brit. Lep.* 1 : 449.

(Pl. 52, fig. 18)

Lectotype: ♂ 22 mm. "Le Lautaret, 1-6 Aug. 1896. ex coll. Tutt."; "ab. *minor*. Tutt (cotypes) Nat Hist. Brit Lep. 1.449".  
ex Rothschild collection. Slide No. 443.

***Zygaena exulans* R. & H. ssp. *altaratensis* Le Charles ab. *flavilinea* Tutt**

*Zygaena exulans* var. *flavilinea* Tutt, 1894, *Ent. Rec.* 5 : 267.

(Pl. 52, fig. 19)

The type is not in the British Museum. The specimen I figure here is a female, and is labelled "Le Lautaret, 1-6 Aug. 1896. ex coll. Tutt."; "ab. *flavilinea* Tutt. (Nat. Hist. Brit. Lep. 1 : 448 (types)".  
ex Rothschild collection. Slide No. 664.

Although labelled "types" by Tutt, the specimen was captured after the description was published.

***Zygaena exulans* R. & H. ssp. *altaratensis* Le Charles ab. *flava* Oberthür**

*Zygaena exulans* ab. *flava* Oberthür, 1896, *Et. d'Ent.* 20 : 43, pl. 8, fig. 141.

(Pl. 52, fig. 20)

Type: ♂ 28 mm. "Lautaret Emm. Martin"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8, No 141"; "coll. Ch. Oberthür".  
ex Rothschild collection. Slide No. 444.

***Zygaena loti* Schiffermüller & Denis**

*Sphinx loti* Schiffermüller & Denis, 1775, *Wien. Verz.*, p. 45.

***Zygaena loti* S. & D. ssp. *miniacea* Oberthür**

*Zygaena achilleae* race *miniacea* Oberthür, 1910, *Lép. Comp.* 4 : 462.

(Pl. 52, fig. 21)

Lectotype: ♂ 31 mm. "Charente-Inférieure Dompierre-sur-Mer P. Boulé 8-15. VI. 1907"; "miniacea Obthr. Lépid. compar. IV-1910"; "coll. Ch. Oberthür".  
ex Rothschild collection. Slide No. 465.

***Zygaena loti* S. & D. ssp. *miniacea* Obthr. ab. *flava* Oberthür**

*Zygaena achilleae* ab. *flava* Oberthür, 1896, *Et. d'Ent.* 20 : 43, pl. 8, fig. 140.

(Pl. 52, fig. 22)

Lectotype: ♂ 32 mm. "EX. MUSAEO Dris BOISDUVAL"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 140"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 464.

The lectotype has no locality label but according to Oberthür the specimen came from Bondy, near Paris. As stated by Oberthür, there are seven specimens in the collection. Five of these specimens are from the Bellier collection, four of which are labelled "Paris". One specimen is from the de Graslin collection and is labelled "v. bellis Becker" and "achilleae", while the specimen selected as lectotype originated from the Boisduval collection as stated above.

*Zygaena loti* S. & D. ssp. *achillalpina* Burgeff

*Zygaena achilleae* var. *achillalpina* Burgeff, 1926, *Mitt. münchen. ent. Ges.* 16 : 34 (new name for *alpina* Obthr. [preoccupied]).

*Zygaena achilleae* race *alpina* Oberthür, 1910, *Lép. Comp.* 4 : 466.

(Pl. 52, fig. 23)

Lectotype: ♂ 31 mm. "Env. de Digne A. Coulet 1901"; "alpina Obthr.

Lépidopt. comparée achilleae, Bdv. *Icones*, Pl. 53. fig. 6."; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 466.

*Zygaena loti* S. & D. ssp. *janthina* Boisduval

*Zygaena janthina* Boisduval, 1829, *Mon. Zyg.*, p. 45, pl. 8, fig. 7.

(Pl. 52, fig. 24)

Type: ♂ 28 mm. "Janthina"; "EX. MUSAEO Dris. BOISDUVAL"; "Vu par Staudinger Catalogue 1900"; "coll. Ch. Oberthür.", and a label in Oberthür's hand "Janthina Boisduv. type—Essai Monogr. Zygèn. Pl. VIII. fig. 7—Obthr. Lépid. compar. IVe liv'on 1910".

ex Rothschild collection. Slide No. 470.

Described from Oysans and the Alps of Provence.

*Zygaena loti* S. & D. ssp. *wagneri* Mill. ab. *sexmacula* Dziurzynski

*Zygaena wagneri* f. *sexmacula* Dziurzynski, 1908, *Berl. ent. Z.* 53 : 22.

*Zygaena achilleae wagneri* ab. *quadrimaculata* Oberthür, 1910, *Lép. Comp.* 4 : 471.

[quadrimaculata]

(Pl. 52, fig. 25)

Lectotype: ♂ 33 mm. "Alpes-Maritimes Decoster, 1907 Mt Pacanaglia 10-18 Juin"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 467.



***Zygaena loti* S. & D. ssp. *tristis* Oberthür**

*Zygaena Achilleae* var. *tristis* Oberthür, 1884, *Et. d'Ent.* 8 : 29.

(Pl. 52, fig. 26)

Lectotype: ♂ 31 mm. "Hautes-Pyrénées Cauterets R. Oberthür Juillet 1883"; "var. *tristis* Obtr."; "Vu par Staudinger Catalogue 1900"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 468.

***Zygaena loti* S. & D. ssp. *tristis* Obthr. ab. *brunnea* Oberthür**

*Zygaena Achilleae* var. *tristis* ab. *brunnea* Oberthür, 1910, *Lép. Comp.* 4 : 464.

(Pl. 52, fig. 27)

Type: ♂ 30 mm. "Hautes-Pyrénées Env. de Cauterets 28 Juin—11 Juill. 99 Charles Oberthür."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 469.

***Zygaena loti* S. & D. ssp. *aspera* Bgff. f.t. *italica-aestivalis* Oberthür**

*Zygaena achilleae* race *italica-aestivalis* Oberthür, 1910, *Lép. Comp.* 4 : 662.

(Pl. 52, fig. 28)

Lectotype: ♂ 25 mm. "Italie méridionale Roccaroso et Palena fin Juillet et Août 1907 Fabresse"; "Achilleae *italica-aestivalis* Obthr. IV liv., Lépidopt. comparée (addenda)"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 471.

The correct name is *italica-aestivalis* Obthr. and not *aestivalis* auct.

***Zygaena loti* S. & D. ssp. *castellana* Stauder**

*Zygaena achilleae* [sic] ssp. *castellana* Stauder, 1929, *Ent. Z.* 43 : 79.

(Pl. 52, fig. 29)

Type: ♀ 33 mm. "Teriol. m. Seiseralpe 30/7. 1928 1500 m H. Stauder"; "achilleae ss. *castellana* Stdr. Type".

ex Rothschild collection. Slide No. 472.

***Zygaena loti* S. & D. ssp. *restricta* Stauder**

*Zygaena achilleae restricta* Stauder, 1915, *Z. wiss. InsektBiol.* 11 : 71.

*Zygaena* hybr. f. *punctachilleae* Stauder, 1929, *Ent. Z.* 43 : 30.

*Zygaena* hybr. f. *punctmeliloti* Stauder, 1929, *Ent. Z.* 43 : 31.

*Zygaena* hydr. f. *melilorestricta* Stauder, 1929, *Ent. Z.* 43 : 31.

[*punctachilleae*]

(Pl. 52, fig. 30)

Lectotype: ♂ 28 mm. "Italia mer. penins. Sorrento Mte Faito 10.6. 1921 1000 m. H. Stauder"; "6829"; "Type *Zygaena* hybr. punctachilleae Stdr. ex punctum × achilleae".

ex Rothschild collection. Slide No. 688.

There are two further specimens, one from the same locality as the lectotype, labelled "Ital. mer. pen.—Sorrentina 10.6. 1913 H. Stauder"; "Type hybr. *Zyg. punctachilleae* Stdr. Produkt ex punctum × achilleae"; "8289".

The third specimen is labelled "Litorale austr. Repentabor Altipiano 14.6. 1912. H. Stauder"; "*Zyg. hybr. punctachilleae* Stdr. ex. punctum × achilleae Type".

[punctmeliloti]

(Pl. 52, fig. 31)

Lectotype: ♂ 29 mm. "Italia mer. penins. Sorrento Mte. Falto 5.7. 1928 H. Stauder collo f. 950 m"; "Type hybr. punctmeliloti Stdr."; "6821".  
Erroneously described as a female.

ex Rothschild collection. Slide No. 689.

There are two further specimens, one labelled "Litorale austr. Repentabor Altipiano 14.6. 1912. H. Stauder"; "6823"; "hybr. punctmeliloti Stdr. Type.". This specimen was erroneously stated to be a female in the description. The third specimen is labelled "Italia mer. penins. Sorrento. Mte. Falto. Collo f. 950 m. 30.6. 1928. H. Stauder"; "6822".

Mte. Faito is erroneously spelt "Mte. Falto" on the pin labels.

[melilorestricta]

(Pl. 52, fig. 32)

Lectotype: ♂ 28 mm. "Italia mer. penins. Sorrento Mte Falto 2.7. 1928. H. Stauder Collo f. 950 m"; "6832"; "hybr. melilorestricta Stdr.".

ex Rothschild collection. Slide No. 475.

There are three further specimens taken at the same locality but dated "28.6. 1928" and additionally labelled "6830"; "6831"; "6833".

Mte. Faito is erroneously spelt "Mte Falto" on the pin labels.

All the supposed hybrids of Stauder were captured wild and were not bred. I have examined the genitalia and find them quite normal and I consider the specimens normal. As the specimens do not differ from the normal race in superficial characters I treat all the names as synonyms.

Subg. *ZYGAENA* Fabricius*Zygaena graslini* Lederer

*Zygaena Graslini* Lederer, 1855, *Verh. zool.-bot. Ges. Wien*, 5 : 197, pl. 2, figs. 3, 4.

***Zygaena graslini*** Led. ab. ***confluens*** Oberthür

*Zygaena Graslini* ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20 : 46, pl. 7, fig. 128.

(Pl. 52, fig. 33)

Type : ♂ 28 mm. "Syrie Akbès 1891"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol Pl. 7 No. 128"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 479.

***Zygaena anthyllidis*** Boisduval

*Zygaena anthyllidis* Boisduval, 1829, *Mon. Zyg.*, p. 78, pl. 4, fig. 8.

(Pl. 52, fig. 34)

Lectotype : ♂ 35 mm. "Anthyllidis. B.D."; "EX. MUSAEO Dris BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 477, Pl. 61, figs. 5, 6.

The species is not found in Southern Spain as stated by Boisduval. Barèges in the High Pyrenees should be taken as the type locality as this was mentioned by Boisduval in 1834, *Icones*, 2 : 69.

***Zygaena rhadamanthus*** Esper

*Sphinx rhadamanthus* Esper, 1793, *Die Schmett. Suppl.* 2 (2) : 13, pl. 40, figs. 1, 2.

***Zygaena rhadamanthus*** Esp. ssp. ***stygia*** Bgff. ab. ***quinquemaculata*** Oberthür

*Zygaena rhadamanthus* ab. *quinquemaculata* Oberthür, 1910, *Lép. Comp.* 4 : 595 (with reference to *Lép. Comp.* 3, pl. 29, figs. 181, 183).

(Pl. 52, fig. 35)

Lectotype : ♂ 30 mm. "Alpes-Maritimes, Mont Pacanaglia 7-8-10 Juin 1906 R. Powell"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 183"; "*Zygaena Rhadamanthus* Kiesenwetteri, H-S. no 96"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 481.

***Zygaena rhadamanthus*** Esp. ssp. ***stygia*** Bgff. ab. ***obscura*** Oberthür

*Zygaena rhadamanthus* ab. *obscura* Oberthür, 1910, *Lép. Comp.* 4 : 595.

(Pl. 52, fig. 36)

Type : ♂ 28 mm. "Alpes-Maritimes La Turbie-Laghet 6-8 Juin 1906 R. Powell"; "Ab. *obscura*, Obthr. Lépid. compar. IV-1910"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 482.

***Zygaena rhadamanthus*** Esp. ssp. ***grisea*** Oberthür

*Zygaena Rhadamanthus-grisea* Oberthür form *cingulata* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 187.

(Pl. 53, fig. 1)

Type : ♀ 29 mm. "Chasseurs de Digne Juin 1897"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 187"; "*Zygaena Rhadamanthus-grisea* Obthr. forma : *cingulata*."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 484.

It is unfortunate that Oberthür, when publishing the name *grisea*, figured the aberration *cingulata*, as this will have to be taken as the typical form of the race and the name *cingulata*, which has no nomenclatural status, must be disregarded.

***Zygaena rhadamanthus*** Esp. ssp. ***grisea*** Obthr. ab. ***guenéei*** Oberthür

*Zygaena Rhadamanthus-Guenéei* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, figs. 185, 186 (with reference to Guenée, *Ann. Soc. ent. Fr.* 1870, pl. 7, fig. 12).

*Zygaena Rhadamanthus* ab. *Guenéei* Oberthür, 1910, *Lép. Comp.* 4 : 587.

(Pl. 53, fig. 2)

Type : ♂ 25 mm. "Celles les Bains" and a label in Guenée's hand "la très curieuse aberration No 5 a été prise par moi à Celles, sortant de la chrysalide or je n'ai vu un second individu dont je n'ai pu m'emparer. Je l'ai publié dans les annales"; "Ex. Musaeo Ach. Guenée"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 483.

When publishing the name *guenéei*, Oberthür figured two specimens from Digne, and at the same time referred to Guenée's specimen. In 1910 (*Lép. Comp.* 4 : 587), he described the aberration attributing the name to this specimen. From this evidence I consider the Guenée specimen to be the type.

***Zygaena rhadamanthus*** Esp. ssp. ***alfacarensis*** Reiss ab. ***flava*** Oberthür

*Zygaena Rhadamanthus-flava* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 184.

(Pl. 53, fig. 3)

Type : ♂ 28 mm. "Tijola (Almería) Escalera 1900"; "A servi de Modèle à J. Pulot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Cl. XXIX fig. 184"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 480.

***Zygaena rhadamanthus*** Esp. ssp. ***barcina*** Vrtý. ab. ***kiesenwetterii*** Herrich-Schäffer

*Zygaena kiesenwetterii* Herrich-Schäffer, 1851, *Schmett. Europa*, 2, pl. 14, figs. 97, 98.

*Zygaena Kiesenwetteri* Herrich-Schäffer, 1852, *Schmett. Europa*, 6 : 46.

*Zygaena staechadis* Boisduval, 1834, *Icones*, 2 : 71, pl. 55, fig. 4, (preoccupied).

[staechadis]

(Pl. 53, fig. 4)

Type : ♂ 30 mm. " Barcelone " ; " Staechadis. O.B. Lavandulae. H. " ; " EX. MUSAE O Dris. BOISDUVAL " ; " coll. Ch. Oberthür. ".

ex Rothschild collection. Slide No. 485.

Boisduval described *staechadis* as a good species and did not confuse it with the *stoechadis* of other authors. It is, however, preoccupied by *stoechadis* Borkh., 1793, and the name *kiesenwetterii* H.-S. must be used.

### *Zygaena oxytropis* Boisduval

*Zygaena oxytropis* Boisduval, 1829, *Mon. Zyg.*, p. 89, pl. 5, fig. 7.

(Pl. 53, fig. 5)

Type : ♂ 24 mm. " Oxytropis. B.D. " ; " EX. MUSAE O Dris BOISDUVAL " ; " coll. Ch. Oberthür. ".

ex Rothschild collection. Slide No. 478, Pl. 62, figs. 1, 2.

Boisduval gave no indication of the exact locality in his description but stated that the species was found at Piedmont and Italy and that specimens had been taken in the neighbourhood of Rome and Tuscany. In 1834 (*Icones*, 2 : 70), Boisduval stated that specimens were found in the neighbourhood of Florence, in Tuscany. The subspecies from Tuscany, above Florence, should be considered the nominate race as it agrees well with Boisduval's description and the type, *vide* Verity, 1920 (*Ent. Rec.* 32 : 159).

### *Zygaena theryi* de Joannis

*Zygaena Theryi* de Joannis, June 1908, *Bull. Soc. ent. Fr.*, p. 203.

*Zygaena lavandulae nisseni* Rothschild, August 1908, *Entomologist*, 41 : 185.

[nisseni]

(Pl. 53, fig. 6)

Type : ♂ 28 mm. " Type ♂ *Z. lav. nisseni* Entomologist Aug. 1908 p. 185 Hamman R'Irha 26.5. 1908 ".

ex Rothschild collection. Slide No. 488, Pl. 62, figs. 3, 4.

Originally described by Rothschild as a subspecies of *lavandulae* Esp., but has since proved to be a good species. However, the name *nisseni* falls in synonymy under *theryi* de Joannis, which was published two months earlier. De Joannis described *theryi* from a female specimen taken in the neighbourhood of Philippeville.



*Zygaena lavandulae* Esper*Sphinx lavandulae* Esper, 1783, *Die Schmett.* 2 : 221, pl. 34, fig. 2.*Zygaena lavandulae* Esp. ab. *siepii* Oberthür*Zygaena lavandulae-Siepii* Oberthür, 1909, *Lép. Comp.* 3, pl. 28, fig. 162.

(Pl. 53, fig. 7)

Type: ♂ 32 mm. "Vallons de St. Pons Dr. Siepi 11 Juin 1906." ; "acheté par R. Oberthür en mai 1907 dix jours avant son arrestation" ; "*Zygaena lavandulae-Siepii* Obthr. type" ; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII no 162" ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 486.

*Zygaena lavandulae* Esp. ab. *powelli* Oberthür*Zygaena lavandulae* ab. *Powellii* Oberthür, 1910, *Lép. Comp.* 4 : 586.

(Pl. 53, fig. 8)

Type: ♂ 32 mm. "Alpes-Maritimes-Entre le Laghet et les moulins Gaetti. 1906. 13 juin Harold Powell." ; "Ab. *Powellii*, Obthr. I Ve Vol. Lépid. compar. 1910." ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 487.

*Zygaena ephialtes* Linnaeus*Sphinx Ephialtes* Linnaeus, 1767, *Syst. Nat.*, ed. XII, p. 806.*Zygaena ephialtes* L. ab. *wulschlegeli* Oberthür*Zygaena Ephialtes-Wulschlegeli* Oberthür, 1909, *Lép. Comp.* 3, pl. 29, fig. 176.

(Pl. 53, fig. 9)

Type: ♂ 33 mm. "*Zygaena Ephialtes*, 24/7 1907—Plancerisier. Martigny (Valais) ex/*Wulschlegeli* (Obthr) type" ; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXIX fig. 176" ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 721.

*Zygaena ephialtes* L. ab. *falcatae* Oberthür*Zygaena ephialtes* ab. *falcatae* Oberthür, 1910, *Lép. Comp.* 4 : 572 (with reference to *Et. d'Ent.* 20, pl. 7, fig. 113).*Zygaena ephialtes-falcatae* Hübn., Obthr. nec Hübn., 1896, *Et. d'Ent.* 20, pl. 7, fig. 113.

(Pl. 53, fig. 10)

Type: ♀ 38 mm. "Vernet-l-Bains R. Oberthür Juillet 1885."; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 7 No. 113"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 724.

This aberration differs from the *falcatae* of Hübner in having the outer spots of the fore wings tinged with carmine. Hübner's *falcatae* is a synonym of *medusa* Pallas.

***Zygaena ephialtes* L. ab. *scheveni* Oberthür**

*Zygaena ephialtes* ab. *Scheveni* Oberthür, 1910, *Lép. Comp.* 4: 570.

(Pl. 53, fig. 11)

Lectotype: ♀ 35 mm. "Zyg. var. *sophiae* ♀ Août/Martigny."; "Reçu de Wullschlegel de Martigny (Valais)"; "Scheveni Obthr. IV.-Lépid. compar. 1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 725.

As quoted above, there is a label on which is written "var. *sophiae*"; this is in Wullschlegel's hand.

***Zygaena ephialtes* L. ab. *esperi* Oberthür**

*Zygaena ephialtes* ab. *Esperi* Oberthür, 1910, *Lép. Comp.* 4: 570.

(Pl. 53, fig. 12)

Lectotype: ♀ 37 mm. "Zyg. *ephialtes* ♀. Août Martigny."; "Esperi Obthr. IV.-Lépid. compar. 1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 722.

***Zygaena ephialtes* L. ab. *pallens* Oberthür**

*Zygaena ephialtes* ab. *pallens* Oberthür, 1910, *Lép. Comp.* 4: 576.

(Pl. 53, fig. 13)

Type: ♂ 31 mm. "Digne V. Cotte 1908"; "pallens, Obthr. Lépid. comparée IV-Mai 1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 723.

***Zygaena ephialtes* L. ssp. *athamanthae* Esp. ab. *pallida* Oberthür**

*Zygaena ephialtes* ab. *pallida* Oberthür, 1910, *Lép. Comp.* 4: 576.

(Pl. 53, fig. 14)

Type: ♂ 35 mm. "W. Philipp. Austr. inf. Wachau VII/07"; "pallida, Obthr., Lépid. comparée IV-Mai 1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 694.

***Zygaena ephialtes* L. ssp. *athamanthae* Esp. ab. *adalberti* Oberthür**

*Zygaena ephialtes* ab. *Adalberti* Oberthür, 1910, *Lép. Comp.* 4 : 574.

(Pl. 53, fig. 15)

Oberthür applied the name *adalberti* to the specimen illustrated by Seitz in 1910 (Seitz, *Macrolep.* 2, pl. 6b).

I figure a specimen labelled *adalberti* by Oberthür, which has the following data : " W. Philipp Austr. inf. Wachau VII 07." ; " Adalberti, Obthr. icterica (par erreur) Seitz-Zygaena 6.b." ; " coll. Ch. Oberthür." ex Rothschild collection. Slide No. 695.

***Zygaena ephialtes* L. ssp. *meridiei* Bgff. ab. *decolorata* Stauder**

*Zygaena ephialtes* ssp. *meridionalis* Bgff. f. *decolorata* Stauder, 1929, *Ent. Z.* 43 : 80 (*meridiei* Bgff. new name for *meridionalis* Bgff. [preoccupied]).

(Pl. 53, fig. 16)

Type : ♀ 38 mm. " Teriol. m. Castelrotto 800 m. 4/8. 1928 H. Stauder " ; " f.n. *decolorata* Stdr." ; " 6811 ".

ex Rothschild collection. Slide No. 696.

***Zygaena transalpina* Esper**

*Sphinx transalpina* Esper, 1782, *Die Schmett.* 2 : 142, pl. 16, figs.

***Zygaena transalpina* Esp. ssp. *maritima* Oberthür**

*Zygaena maritima* Oberthür, 1898, *Bull. Soc. ent. Fr.*, p. 22.

*Zygaena xanthographa helvetica* Rothschild & Bethune-Baker, 1920, *Proc. ent. Soc. Lond.*, p. xlix.

[*maritima*]

(Pl. 53, fig. 17)

Lectotype : ♂ 33 mm. " Alpes-Maritimes Nice (Turbie) V. Cotte Juin 1897 " ; " *maritima*, Ch. Obthr. Bull. Sté. Ent. France No 2—1898, p. 22—23 " ; " Vu par Staudinger Catalogue 1900 " ; " coll. Ch. Oberthür.".

ex Rothschild collection. Slide No. 716.

[*helvetica*]

(Pl. 53, fig. 18)

Lectotype : ♂ 37 mm. " Moulinet " ; " 504 ".

ex Rothschild collection. Slide No. 720.

***Zygaena transalpina* Esp. ssp. *maritima* Obthr. ab. *trimacula* Reiss**

*Zygaena transalpina* ssp. *maritima* ab. *trimacula* Reiss, 1930, in Seitz, *Macrolep.*, Suppl., 2 : 39  
(new name for *trimaculata* Obthr. [preoccupied]).

*Zygaena transalpina-maritima*-3 *maculata* Oberthür, 1909, *Lép. Comp.* 3, pl. 30, fig. 189.

*Zygaena transalpina-maritima* ab. *trimaculata* Oberthür, 1912, *Lép. Comp.* 6 : 188.

(Pl. 53, fig. 19)

Type : ♀ 37 mm. "Alpes-Maritimes Nice (Turbie) V. Cotte Juin 1897"; "*Zygaena transalpina-maritima* Obthr. 3-maculata XXX. 189"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXX fig. 189"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 717.

***Zygaena transalpina* Esp. ssp. *alpina* Boisduval**

*Zygaena Alpina* Boisduval, 1834, *Icones* 2 : 66, pl. 53, fig. 9.

*Zygaena angelicae* Ochs., *Boisd. nec Ochs.*, 1834, *Icones*, 2 : 65, pl. 53, fig. 9.

This subspecies of *transalpina* was described from Grenoble (Isère) in the Alps. I cannot find the type in the Boisduval collection and assume that it is lost.

***Zygaena transalpina* Esp. ssp. *alpina* Boisd. ab. *flava* Oberthür**

*Zygaena transalpina-alpina-flava* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 39.

(Pl. 53, fig. 20)

Type : ♂ 36 mm. "Digne Coulet 1906"; "*alpina-flava*. *Ann. Soc. ent. France*, 1907.p.39."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 715.

The specimen figured in *Lép. Comp.*, 3, pl. 30, fig. 200 was captured after the publication of the name and cannot be taken as the type.

***Zygaena transalpina* Esp. ssp. *alpina* Boisd. ab. *grisescens* Oberthür**

*Zygaena transalpina-grisescens* Oberthür, 1920, *Lép. Comp.* 17 : 62, pl. 507, fig. 4248.

(Pl. 53, fig. 21)

Type : ♂ 31 mm. "Argentière août 1907"; "A servi de Modèle à J. Culot, pour le No 4248 de la Pl. DVII Vol. XVII, Etude de Lépidoptérologie comparée."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 697.

***Zygaena transalpina* Esp. ssp. *sorrentina* Stdgr. ab. *impar* Oberthür**

*Zygaena transalpina* ab. *impar* Oberthür, 1911, *Lép. Comp.* 5 (1) : 206, pl. 62, figs. 569, 571.

(Pl. 53, fig. 22)

Lectotype : ♂ 31 mm. " Italle Central (Formia) Avril 1910. Mètres 50 " ; " *Zygaena Transalpina Maritima ADFLATA* Turati " ; " Lépidoptérol. comparée V—Pl. LXII fig. 569 " ; " coll. Ch. Oberthür. "

ex Rothschild collection. Slide No. 719.

Although the specimen is labelled "ADFLATA", it is one of the specimens to which Oberthür applied the name *impar*. The "ADFLATA" label is printed and was probably assigned to the specimen by the collector.

***Zygaena transalpina* Esp. ssp. *sorrentina* Stdgr. ab. *aurantiaca* Oberthür**

*Zygaena transalpina* ab. *aurantiaca* Oberthür, 1911, *Lép. Comp.* 5 (1) : 208, pl. 62, fig. 583.

(Pl. 53, fig. 23)

Type : ♀ 35 mm. " S. Angelo 900 m. 29/6/07 " ; " Italie méridionale Fr. Zickert 1907 " ; " Lépidoptérolog. comparée V—Pl. LXII fig. 583. " ; " coll. Ch. Oberthür. "

ex Rothschild collection. Slide No. 718.

Erroneously recorded in the description as having been captured " 29 mai 1907 ".

***Zygaena transalpina* Esp. ssp. *altitudinaria* Turati f.t. *aestivalis* Oberthür**

*Zygaena Transalpina-aestivalis* Oberthür, 1910, *Lép. Comp.* 4 : 663.

(Pl. 53, fig. 24)

Lectotype : ♂ 28 mm. " Italie méridionale Roccaroso et Palena fin Juillet et Août 1907 Fabresse " ; " *transalpina-aestivalis*, Obthr-Lépid. comparée ; Vol. IV ; (Addenda) p. 663 " ; " coll. Ch. Oberthür. "

ex Rothschild collection. Slide No. 714.

***Zygaena transalpina* Esp. ssp. *athicaria* Burgeff**

*Zygaena transalpina* var. *athicaria* Burgeff, 1926, *Mitt. münchen. ent. Ges.* 16 : 79.

*Zygaena transalpina* ssp. *costazzina* Stauder, 1929, *Ent. Z.* 43 : 81.

[*costazzina*]

(Pl. 53, fig. 25)

Type : ♂ 30 mm. " Teriol. m. Seiseralpe 1600 m. 2/8. 1928 H. Stauder " ; " Type ssp. *costazzina* Stdr. "

ex Rothschild collection. Slide No. 698.

***Zygaena hippocrepidis* Hübner**

*Sphinx hippocrepidis* Hübner, [1796]—[24th December 1799], *Europ. Schmett.* 2, pl. 17, fig. 83.



***Zygaena hippocrepidis*** Hübn. ssp. ***centralis*** Oberthür

*Zygaena hippocrepidis-centralis* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 40.

(Pl. 53, fig. 26)

Lectotype: ♂ 30 mm. "Lardy Seine-&-Oise Lhotte 1896"; "*Zygaena hippocrepidis-centralis*, Obthr. *Ann. Soc. ent. France* 1907 p. 40, 41, 48"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 707.

***Zygaena hippocrepidis*** Hübn. ssp. ***centralis*** Obthr. ab. ***nigricans*** Oberthür

*Zygaena Hippocrepidis* ab. *nigricans* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 146.

(Pl. 53, fig. 27)

Type: ♂ 28 mm. "Lardy 1886."; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 146"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 708.

***Zygaena hippocrepidis*** Hübn. ssp. ***centralis*** Obthr. ab. ***flava*** Oberthür

*Zygaena Hippocrepidis* ab. *flava* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 144.

(Pl. 53, fig. 28)

Type: ♂ 30 mm. "Lardy (Seine & Oise) Emman. Martin."; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No 144"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 712.

***Zygaena hippocrepidis*** Hübn. ssp. ***provincialis*** Oberthür

*Zygaena hippocrepidis-provincialis* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 45.

*Zygaena Transalpina* f. *Meridionalis* Oberthür, 1911, *Lép. Comp.* 5 (1) : 213.

[provincialis]

(Pl. 54, fig. 1)

Lectotype: ♀ 27 mm. "Var Montrieux près Méounes 17-23 Septembre 1906 R. Powell"; "*hippocrepidis-provincialis*. *Ann. Soc. ent. France* 1907—p. 45-48"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 710.

[meridionalis]

(Pl. 54, fig. 2)

Lectotype: ♂ 26 mm. "Var Montrieux près Méounes du 23 septembre au 4 octobre 1906 H. Powell"; "*Zygaena hippocrepidis-provincialis*, Obthr XXX—192";

“ A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908–1909 Pl. XXX fig. 192 ”; “ coll. Ch. Oberthür.”.  
ex Rothschild collection. Slide No. 711.

***Zygaena hippocrepidis* Hübn. ssp. *occidentalis* Oberthür**

*Zygaena hippocrepidis-occidentalis* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 41.

(Pl. 54, fig. 3)

Lectotype: ♂ 31 mm. “ Charente-Infre. Dompierre-sur-Mer P. Boulé Fin mai 1906.”; “ coll. Ch. Oberthür.”.  
ex Rothschild collection. Slide No. 702.

I would have preferred, if it were possible, to have selected as the lectotype, the female figured by Oberthür in *Lép. Comp.* 3, pl. 30, fig. 203. However, this specimen was taken after the publication of the name *occidentalis*.

***Zygaena hippocrepidis* Hübn. ssp. *occidentalis* Obthr. ab. *micingulata* Oberthür**

*Zygaena hippocrepidis-occidentalis* ab. *micingulata* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 42.

(Pl. 54, fig. 4)

Lectotype: ♀ 33 mm. “ Dompierre-sur-Mer (Charente-Infre.) 30 Mai 1899 Th. Vigé ”; “ *Z. hippocrepidis-micingulata*; *Ann. Soc. ent. France* 1907. p. 42.”; “ coll. Ch. Oberthür.”.  
ex Rothschild collection. Slide No. 709.

Again, I would have preferred to have selected as the lectotype the specimen figured by Oberthür in *Lép. Comp.* 3, pl. 30, fig. 207. However, this specimen was taken in June, 1907, after the publication of the name.

***Zygaena hippocrepidis* Hübn. ssp. *occidentalis* Obthr. ab. *pallidior* Oberthür**

*Zygaena hippocrepidis-occidentalis* ab. *pallidior* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 43.

(Pl. 54, fig. 5)

Lectotype: ♀ 23 mm. “ Dompierre-sur-Mer (Charente-Infre.) 17 Sept. 1900 Th. Vigé ”; “ *Z. hippocrepidis pallidior*—*Ann. Soc. ent. France* 1907. p. 43.”; “ A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908–1909 Pl. XXX fig. 202 ”; “ coll. Ch. Oberthür.”.  
ex Rothschild collection. Slide No. 705.

***Zygaena hippocrepidis* Hübn. ssp. *occidentalis* Obthr. ab. *rosea* Oberthür**

*Zygaena hippocrepidis-occidentalis* ab. *rosea* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 43.

(Pl. 54, fig. 6)

Lectotype: ♂ 29 mm. “ Dompierre-sur-Mer (Charente-Infre.) 25 Mai 1899 Th.

Vigé"; "*Z. hippocrepidis rosea*—Ann. Soc. ent. France. 1907. p. 43"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 706.

***Zygaena hippocrepidis* Hübn. ssp. *occidentalis* Obthr. ab. *vigei* Oberthür**

*Zygaena hippocrepidis-occidentalis* ab. *Vigei* Oberthür, 1907, *Ann. Soc. ent. Fr.* 76 : 43.

(Pl. 54, fig. 7)

Lectotype : ♀ 30 mm. "Charente-Inférieure Dompierre-sur-Mer"; "1896"; "*Z. hippocrepidis* Vigéi,—Ann. Soc. ent. France 1907. p. 43."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909. Pl. XXX fig. 201"; "*Zygaena hippocrepidis-occident.* Vigéi, Obthr. XXX. 201"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 704.

***Zygaena viciae* Schiffermüller & Denis**

*Sphinx viciae* Schiffermüller & Denis, 1775, *Wien. Verz.*, p. 45.

***Zygaena viciae* S. & D. ssp. *anglica* Reiss ab. *confluens* Tutt**

*Anthrocera viciae* (Schrank) ab. *confluens* Tutt, 1899, *Brit. Lep.* 1 : 456.

(Pl. 54, fig. 8)

The type is not in the British Museum and cannot be found. I figure a male labelled : "Lyndhurst New Forest 6.vi.1908".  
ex Rothschild collection. Slide No. 666.

***Zygaena viciae* S. & D. ssp. *anglica* Reiss ab. *sexpunctata* Tutt**

*Anthrocera viciae* (Schrank) ab. *sexpunctata* Tutt, 1899, *Brit. Lep.* 1 : 455.

(Pl. 54, fig. 9)

The type is not in the British Museum and cannot be found. I figure a female with the following data : "24"; "ex coll. J. A. Clark dec."  
ex Whittle collection. Slide No. 659.

***Zygaena viciae* S. & D. ssp. *teriolensis* Speyer ab. *decora* Lederer**

*Zygaena meliloti* ab. *Decora* Lederer, 1852, *Verh. zool.-bot. Ges. Wien*, 2 : 125.

*Zygaena Charon* var. *Cingulata* Frey, 1884, *Mitt. schweiz. ent. Ges.* 7 : 14.

[cingulata]

(Pl. 54, fig. 10)

Type : ♀ 28 mm. "*Z. Charon* var. *Cingulata* Stgr. Meran."; "Frey Coll. 1890".  
Slide No. 533.

***Zygaena viciae* S. & D. ssp. *giussana* Stauder**

*Zygaena meliloti* ssp. *giussana* Stauder, 1929, *Ent. Z.* **43** : 79.

(Pl. 54, fig. 11)

Type : ♂ 26 mm. "Italia mer. penins. Sorrento Mte. Falto 24.6. 1928 H. Stauder 1000 m"; "meliloti v. giussana Stdr."

ex Rothschild collection. Slide No. 534.

Mte. Faito is erroneously spelt "Mte. Falto" on the pin label.

***Zygaena viciae* S. & D. ssp. *sicula* Calb. ab. *melilotoides* Ragusa**

*Anthocere* [sic] *sicula melilotoides* Ragusa, 1924, *Boll. Lab. Zool. Portici.* **18** : 93.

(Pl. 54, fig. 12)

Lectotype : ♂ 29 mm. "Prov. Mistretta Local. Salamone Data 25.6. 918. Coll. E. Ragusa"; "Sicily, coll. E. Ragusa".

ex Rothschild collection. Slide No. 673.

***Zygaena viciae* S. & D. ssp. *sicula* Calb. ab. *cingulata* Ragusa**

*Anthocere* [sic] *punctum* ssp. *contamineoides* ab. *cingulata* Ragusa, 1924, *Boll. Lab. Zool. Portici.* **18** : 87.

(Pl. 54, fig. 13)

Type : ♀ 28 mm. "punctum contaminoideid. forma confluenta (distrepta) e cingulata (nova)"; "Sicily, coll. E. Ragusa". Another label which I believe to have been written by Karl Jordan : "ab. confusa Stdgr. ad ab. stentzi Fr".

ex Rothschild collection. Slide No. 671.

An examination of the genitalia showed the specimen to be conspecific with *viciae* S. & D.

***Zygaena viciae* S. & D. ssp. *stentzii* Freyer**

*Zygaena Dorycnii Stentzii* Freyer, 1839, *Neue Beitr. zur. Schmett.* **3** : 120, pl. 278, fig. 4.

(Pl. 54, fig. 14)

Lectotype : ♂ 27 mm. "Stentzii"; "Ex coll. Freyer", a label in Rothschild's hand : "Freyer's type".

ex Rothschild collection. Slide No. 675.

Described from the neighbourhood of Görz and Pontiebba. There are two specimens, one of these I designate as lectotype. The abdomens of both specimens are false, as the genitalia are of *carniolica* Scop.

***Zygaena viciae* S. & D. ssp. *dahurica* Boisduval**

*Zygaena dahurica* Boisduval, 1834, *Icones*, **2** : 57, pl. 54, fig. 7.

(Pl. 54, fig. 15)

Type: ♂ 32 mm. "Sibiria"; "Dahurica B.d."; "Dahurica"; "EX. MUSAEODris. BOISDUVAL"; "Vu par Staudinger Catalogue 1900"; "coll. Ch. Oberthür.", and a label in Oberthür's hand: "Zygaena Dahurica, Bdv. type." ex Rothschild collection. Slide No. 551, Pl. 63, figs. 5, 6.

*Zygaena niphona* Butler

*Zygaena niphona* Butler, 1877, *Ann. Mag. nat. Hist.* (4) 20 : 393.

(Pl. 54, fig. 16)

Type: ♂ 29 mm. "77.9 Japan"; "Z. Niphona Butler Type." Slide No. 559, Pl. 62, figs. 5, 6.

The type was described from Yokohama.

*Zygaena gallica* Oberthür

*Zygaena Corycia* Led. var. *gallica* Oberthür, 1898, *Bull. Soc. ent. Fr.*, p. 21.

(Pl. 54, fig. 17)

Lectotype: ♂ 25 mm. "Chasseurs de Digne Juin 1897"; "Zyg. gallica Ch. Obthr Bull'n Sté Entom. France; 1898"; "Vu par Staudinger Catalogue 1900"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII no 173"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 434, Pl. 63, figs. 1, 2.

*Zygaena dalmatina* Boisduval

*Zygaena dalmatina* Boisduval, 1834, *Icones*, 2 : 45, pl. 54, fig. 2.

(Pl. 54, fig. 18)

Type: ♂ 27 mm. "Dalmatina"; "EX. MUSAEODris. BOISDUVAL"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 435, Pl. 63, figs. 3, 4.

In his description, Boisduval stated that the specimen was taken at Ragusa, in Yugoslavia.

This species, together with ssp. *romeo* Dup., were formerly placed under *scabiosae* Scheven. However, in 1933, Reiss (Seitz, *Macrolep*, Suppl. 2 : 252) considered *romeo* Dup. as the species name. Scheven gave the name *scabiosae* to specimens from Regensburg which were illustrated by Schäffer as *purpuralis* (*Icones Insectorum Ratisbonensium*, pl. 16, figs. 4, 5). As the illustrations of Schäffer are so distinct no doubt is possible. The *purpuralis* still occurs at Regensburg, while *scabiosae auct.* does not occur there. Even if it were found at Regensburg in the time of Schäffer, it must have been so rare that it could not have predominated, so it is reasonable to assume that Schäffer took the commoner species for his illustrations.

However, the name *dalmatina* Boisd. has priority over *romeo* Dup., the latter



name having been published a year later in 1835. It follows that *romeo* will return to subspecific rank and *dalmatina* must be used to designate the species.

An examination of the genitalia of the type of *dalmatina* has shown that it is not conspecific with *punctum* Ochs. as was suggested by Holik (1935, *Ent. Rdsch.* 53 : 56).

### *Zygaena filipendulae* Linnaeus

*Sphinx filipendulae* Linnaeus, 1758, *Syst. Nat.*, ed. X, p. 494 (with reference to *Fauna Suecica*, p. 256, 1746).

*Zygaena filipendulae* L. ssp. *anglicola* Tremewan

*Zygaena filipendulae* ssp. *anglicola* Tremewan, 1960, *Ent. Gaz.* 11 (4) : 189.

*Zygaena filipendulae* ssp. *tutti* Rebel, *auctorum nec Rebel*.

(Pl. 54, fig. 19)

Holotype: ♂ 35 mm. "Tring, Herts., 27.vii. 06 (A. T. Goodson)."; "Z. filipendulae ssp. *anglicola* Tremewan. Holotype ♂. det. W. G. Tremewan, 1959." ex Rothschild collection. Slide No. 685.

*Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *grisescens* Oberthür

*Zygaena filipendulae* ab. *grisescens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 135.

(Pl. 54, fig. 20)

Type: ♂ 34 mm. "Angleterre Ex. coll. Wm. Prest d'York"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8, No. 135"; "ab. *grisescens* Obthr"; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 580.

*Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *confluens* Oberthür

*Zygaena filipendulae* ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 132.

(Pl. 54, fig. 21)

Type: ♂ 33 mm. "Angleterre ex. Coll. Howard Vaughan vendue Salle Stevens 22 & 23 Avril 1890"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 132"; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 545.

*Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *proconfluens* Tutt

*Anthrocera filipendulae* ab. *proconfluens* Tutt, 1899, *Brit. Lep.* 1 : 512.

(Pl. 54, fig. 22)

Lectotype: ♂ 34 mm. "Deal. L.95"; "Deal 1895 ex coll. Tutt"; "ab. *proconfluens*, Tutt (types) (1, 2 + 3 + 4 + 5, 6) Deal. inbred '96-'97 (W. H. B. Fletcher) (see Nat. H.B. Lep. 1.512)". ex Rothschild collection. Slide No. 577.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *quinquejuncta* Tutt***Anthrocera filipendulae* ab. *quinquejuncta* Tutt, 1899, *Brit. Lep.* 1 : 512.

(Pl. 54, fig. 23)

Lectotype: ♀ 38 mm. "Deal bred in C96"; "Deal. ✕ 1896 ex. coll. Tutt";  
 "ab. *quinquejuncta*, Tutt (types) (1, 1 + 2 + 3 + 4 + 5 + 6) inbred Deal '96-'97  
 (W.H.B. Fletcher) see N.H.Brit.Lep. 1.512".  
 ex Rothschild collection. Slide No. 578.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *conjuncta* Tutt***Anthrocera filipendulae* ab. *conjuncta* Tutt, 1899, *Brit. Lep.* 1 : 510.

The type is not in the British Museum. The aberration has all the spots of the  
 fore wings joined to form an irregular single blotch.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *brunnescens* Cockayne***Zygaena filipendulae* ab. *brunnescens* Cockayne, 1940, *Ent. Rec.* 52 : 91.

(Pl. 54, fig. 25)

Type: ♂ 35 mm. "R. GARNER. ORPINGTON. 17 JULY 1937"; "Type ab.  
*brunnescens* Cockayne".  
 Slide No. 582.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *griseorosea* Cockayne***Zygaena filipendulae* ab. *griseorosea* Cockayne, 1954, *Ent. Rec.* 66 : 68.

(Pl. 54, fig. 26)

Type: ♂ 30 mm. "Pont-llan-fraith 7.vii. 1906 No. 3556 W. Rait Smith."; "Type  
 ab. *griseorosea* Cockayne 1954".  
 Slide No. 581.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *nigrolimbata* Cockayne***Zygaena filipendulae* ab. *nigrolimbata* Cockayne, 1954, *Ent. Rec.* 66 : 68.

(Pl. 54, fig. 27)

Type: ♂ 31 mm. "de la Coll. P. H. Harper Vendue Salle Stevens 20, 21 Mars  
 1884"; "Type ab. *nigrolimbata* Cockayne 1954"; "coll. Ch. Oberthür."  
 ex Rothschild collection. Slide No. 583.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *spoliata* Cockayne***Zygaena filipendulae* ab. *spoliata* Cockayne, 1954, *Ent. Rec.* 66 : 68.

(Pl. 54, fig. 24)

Type: ♂ 27 mm. "Nr. Tring, Herts. 7.viii. 1941. A. L. Goodson"; "Type ab. *spoliata* Cockayne 1954."

Slide No. 576.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *miniata* Tutt**

*Anthrocera filipendulae* ab. *miniata* Tutt, 1899, *Brit. Lep.* 1: 510.

The type is not in the British Museum. This aberration has the red replaced by a pinkish hue, often with traces of yellow and was suggested by Tutt to be a form with a pathological failure of pigment. The specimen figured under ab. *aurantia* Tutt has a label: "ab. *miniata* Tutt (Types) N.H.Brit. Lep. 510.". This specimen does not agree with the description of *miniata* and I assume that the label has been transposed.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *intermedia* Tutt**

*Anthrocera filipendulae* ab. *intermedia* Tutt, 1899, *Brit. Lep.* 1: 510.

The type is not in the British Museum. In this aberration the red is replaced by salmon-red. A specimen from Sligo, ex collection Tutt and labelled "intermedia Tutt", does not agree with his description. The red coloration of this specimen is dull and the scales are twisted and deformed. I believe this effect has been caused by a killing agent, probably ammonia.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *trivittata* Tutt**

*Anthrocera filipendulae* ab. *trivittata* Tutt, 1899, *Brit. Lep.* 1: 509.

(Pl. 54, fig. 29)

Type: ♀ 33 mm. "ab. *intermedia-trivittata*, Tutt described N.H.Brit. Lep. 1.509"; "26."; "ex coll. Tutt."

ex Rothschild collection. Slide No. 676.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *aurantia* Tutt**

*Anthrocera filipendulae* ab. *aurantia* Tutt, 1899, *Brit. Lep.* 1: 510.

(Pl. 54, fig. 28)

The type is not in the British Museum. In this aberration the red is replaced by orange. The specimen I figure here is a male labelled "Great Britain" ex Rothschild collection. Slide No. 579 (see ab. *miniata* Tutt).

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. ab. *flava* Robson**

*Zygaena filipendulae* v. *flava* Robson, 1884, *Young Nat.* 5: 236.

*Zygaena filipendulae* ab. *flava* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 133.

[flava Robson]

(Pl. 54, fig. 30)

Lectotype: ♂ 33 mm. "Robson Hartlepool". Slide No. 681.

[flava Oberthür]

(Pl. 54, fig. 31)

Type: ♂ 30 mm. "Winchester O.C."; "Angleterre ex Coll. Rév. G. H. Raynor vendue Salle Stevens 27 Octobre 1891"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 133"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 713.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. f.t. *stephensi* Dupont***Zygaena stephensi* Dupont, 1900, *Bull. Soc. Sci. nat. Elbeuf.*, p. 77.*Anthrocera hippocrepidis* Hübn., Stephens *nec* Hübn., 1828, *Illus. Brit. Ent.* 1 : 109.*Zygaena filipendulae* v. (ab.) *tutti* Rebel, 1901, in Staudinger & Rebel's *Cat. Lep.*, p. 384.

(Pl. 54, fig. 34)

Lectotype: ♂ 35 mm. "Stephens Coll. *Anthrocera hippocrepidis* Steph. ♂ .j. named by Steph."

ex Stephens collection. Slide No. 68.

The designation of the lectotype was published in 1958 (*Ent. Gaz.* 9 (4) : 194).***Zygaena filipendulae* L. ssp. *anglicola* Trmn. f.t. *stephensi* Dupont ab. *minor* Tutt***Anthrocera filipendulae* ab. *minor* Tutt, 1899, *Brit. Lep.* 1 : 509.

(Pl. 54, fig. 35)

Lectotype: ♂ 27 mm. "Belleisle (Fermagh) 93 May"; "Kane's types p. 509"  
"ab. minor, Tutt (types) N.H.Brit Lep. 1.509"; "ex coll. Tutt."  
ex Rothschild collection. Slide No. 677.

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. f.t. *stephensi* Dupont ab. *lutescens* Tutt***Anthrocera hippocrepidis* Hübn., Tutt *nec* Hübn. ab. *lutescens* Tutt, 1899, *Brit. Lep.* 1 : 533.

Stephens (1828, *Illus. Brit. Ent.* 1 : 109) described a yellow aberration which Wood figured in 1839 (*Index Ent.*, pl. 4, fig. 6a). To this figure, Tutt applied the name *lutescens*. In the Stephens collection there is one yellow aberration which is, however, labelled "*filipendulae*".

***Zygaena filipendulae* L. ssp. *anglicola* Trmn. f. loc. *degenerata* Tremewan***Zygaena filipendulae* f. loc. *degenerata* Tremewan, 1958, *Ent. Gaz.* 9 (4) : 192.*Anthrocera hippocrepidis* Hübn., Tutt *nec* Hübn., 1897, *Ent. Rec.* 9 : 87.

(Pl. 54, fig. 32)

Holotype: ♂ 29 mm. "Chattenden. Tutt. Coll. 25.v-24.vi. 92."; "*Zygaena filipendulae* f.l. *degenerata* ♂ Holotype. sel. W. G. Tremewan, 1957."  
ex Tutt collection. Slide No. 585.

*Zygaena filipendulae* L. ssp. *anglicola* Trmn f. loc. *degenerata* Trmn. ab. *pallida* Tutt

*Anthroceva hippocrepidis* Hübn., Tutt *nec* Hübn., ab. *pallida* Tutt, 1899, *Brit. Lep.* 1: 533.

(Pl. 54, fig. 33)

Type: ♀ 26 mm. "Chattenden. Tutt. Coll. 25.v-24.vi. 92."; "ab. *pallida*, Type".  
ex Tutt collection. Slide No. 584.

*Zygaena filipendulae* L. ssp. *pyrenes* Verity

*Zygaena filipendulae* race *pyrenes* Verity, 1921, *Ent. Rec.* 33: 122.

*Zygaena Dubia-quinquemaculata* Oberthür, 1910, *Lép. Comp.* 4: 539.

[quinquemaculata]

(Pl. 55, fig. 5)

Lectotype: ♂ 36 mm. "Pyr. Orient. Vernet-les-Bains R. Oberthür VII. VIII. 1906"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII No. 169"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 683.

The name *quinquemaculata* Obthr. is considered a synonym, as Verity stated that the five-spotted form is typical of *pyrenes* Verity.

*Zygaena filipendulae* L. ssp. *pyrenes* Vrtty. ab. *sexmaculata* Oberthür

*Zygaena Dubia-sexmaculata* Oberthür, 1910, *Lép. Comp.* 4: 539.

(Pl. 55, fig. 6)

Type: ♂ 37 mm. "Vernet R. Oberthür"; "Dubia, forma *stoechadis-medicago* Lépid. comparée. IV 1910."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII No 170"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 684.

*Zygaena filipendulae* L. ssp. *ochsenheimeri* Zeller

*Zygaena Ochsenheimeri* Zeller, 1847, *Isis von oken.*, p. 303.

*Zygaena charon* Boisduval, 1834, *Icones*, 2: 61, pl. 54, fig. 9 (name preoccupied).

[ochsenheimeri]



Zeller applied the name *ochsenheimeri* to specimens that Ochsenheimer had named *transalpina*, as the latter name is preoccupied by *transalpina* Esp. Zeller stated that specimens that he had from Syracuse, Sicily were of the same form. Verity however, has separated the Sicilian race as a good subspecies, viz., ssp. *siciliensis* Vrtý. Ochsenheimer gave Italy and Southern France as the locality but this statement covered a large area and included many races. In 1926 Burgeff (*Mitt. münchen. ent. Ges.* 16 : 66) considered the form from Montpellier to agree most of all with Ochsenheimer's description.

[charon]

(Pl. 54, fig. 36)

Type: ♂ 37 mm. "Charon"; "EX. MUSAEO Dris. BOISDUVAL"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 633.

*Zygaena filipendulae* L. ssp. *ochsenheimeri* Zell. ab. *translonicerae* Stauder

*Zygaena* hybr. f. *translonicerae* Stauder, 1929, *Ent. Z.* 43 : 80.

(Pl. 55, fig. 1)

Type: ♂ 32 mm. "Teriol. m. Seiseralpe 1700 m 7.8. 1928 H. Stauder Costazza"; "6813"; "hybr. *translonicerae* Stdr. Type"; "hybr. ex. *lonicerae* × *transalp. costazzina*".

ex Rothschild collection. Slide No. 700.

An examination of the genitalia, which are quite normal, showed the specimen to be conspecific with *filipendulae* L.

*Zygaena filipendulae* L. ssp. *restituta* Rocci ab. *achillfilipendulae* Stauder

*Zygaena* hybr. f. *achillfilipendulae* Stauder, 1929, *Ent. Z.* 43 : 31.

(Pl. 55, fig. 2)

Type: ♀ 31 mm. "Litorale austr. Görz 3.9. 08. H. Stauder"; "achilleae × *filipendulae* = f. hybr. *achillfilipendulae* Stdr."; "6820".

ex Rothschild collection. Slide No. 476.

An examination of the genitalia, which are normal, showed the specimen to be conspecific with *filipendulae* L. As the type differs in superficial characters from normal specimens of its race, I place it as an aberration.

*Zygaena filipendulae* L. ssp. *veneta* Rocci

*Zygaena filipendulae* ssp. *veneta* Rocci, 1937, *Redia*, 22 : 136.

*Zygaena* hybr. f. *melilofilipendulae* Stauder, 1929, *Ent. Z.* 43 : 31.

[melilofilipendulae]

(Pl. 55, fig. 3)

Type: ♀ 30 mm. "Litorale austr. Triest Umgbg. Cologne el. 15/6 1914 H. Stauder"; "6824"; "hybr. Type. melilofilipendulae Stdr."; "hybr. meliloti × filip. ochs.".

ex Rothschild collection. Slide No. 549.

The specimen was erroneously described as a male. The genitalia are quite normal and I treat the name *melilofilipendulae* as a synonym.

***Zygaena filipendulae* L. ssp. *duponcheli* Vrtý. ab *flava* Oberthür**

*Zygaena filipendulae* ssp. *medicaginis* ab. *flava* Oberthür, 1910, *Lép. Comp.* 4 : 536.

(Pl. 55, fig. 4)

Type: ♂ 34 mm. "Alpes Maritimes Nice (Le Var) V. Cotte Mai 1897"; "Ab. *flava*, Obthr. Lépid. comparée IV-1910"; "coll. Ch. Oberthür.".

ex Rothschild collection. Slide No. 547.

***Zygaena filipendulae* L. ssp. *anceps* Oberthür**

*Zygaena filipendulae* ssp. *anceps* Oberthür, 1910, *Lép. Comp.* 4 : 551.

*Zygaena filipendulae* var. *quinquemacula* Bethune-Baker, 1922, *Ent. Rec.* 34 : 74.

[anceps]

(Pl. 55, fig. 7)

Lectotype: ♂ 33 mm. "Ste. Baume 24 Juin 1906 Dr. Siepi"; "anceps Obthr. Lépid. comparée IV-1910"; "coll. Ch. Oberthür.".

ex Rothschild collection. Slide No. 544.

[quinquemacula]

(Pl. 55, fig. 8)

Lectotype: ♀ 31 mm. "la Sainte Baume, Var, Provence, France 2.7. 20. G. T. Bethune-Baker".

ex Bethune-Baker collection. Slide No. 668.

***Zygaena filipendulae* L. ssp. *campaniae* Rebel**

*Zygaena Stoechadis* var. *campaniae* Rebel, 1901, in Staudinger & Rebel's *Cat. Lep.*, p. 384.

*Zygaena* hybr. f. *melilocampaniae* Stauder, 1929, *Ent. Z.* 43 : 79.

*Zygaena* hybr. f. *hybridophila* Stauder, 1929, *Ent. Z.* 43 : 133.

*Zygaena* hybr. f. *calabrochsenheimeri* Stauder, 1929, *Ent. Z.* 43 : 132.

*Zygaena* hybr. f. *melilochsenheimeri* Stauder, 1929, *Ent. Z.* 43 : 32.

[melilocampaniae]

(Pl. 55, fig. 9)

Type: ♂ 33 mm. "Italia mer. penins. Sorrento Mte. Falto 28.6. 1928 H. Stauder

Collo f. 950 m"; "6816"; "hybr. melilocampaniae Stdr."; "hybr. meliloti × filip. ochsenh. stoechadis campaniae".

ex Rothschild collection. Slide No. 635.

The genitalia are normal and the specimen is conspecific with *filipendulae* L. This specimen and the next three types are all considered synonymous with *campaniae* Rebel as they do not differ from it in superficial characters.

Mte. Faito is erroneously spelt "Mte. Falto" on the pin label.

[hybridophila]

(Pl. 55, fig. 10)

Lectotype: ♀ 37 mm. "Italia mer. penins. Sorrento Mte. Falto 28.6. 1928 H. Stauder 950 m."; "6802"; "hybridophila Stdr.".

ex Rothschild collection. Slide No. 637.

There is a further specimen from the same locality, but labelled "900 m"; "6803". Two further specimens are labelled "Teriol m. Castelrotto 950 m. 26.7. 1928. H. Stauder." and "6804"; "6805".

Mte. Faito is erroneously spelt "Mte. Falto" on the pin labels. The genitalia are normal and the specimens are conspecific with *filipendulae* L.

[calabrochsenheimeri]

(Pl. 55, fig. 11)

Type: ♂ 33 mm. "Italia mer. penins. Sorrento Mte. Falto 25/6. 1928 H. Stauder Piano Faito 1000 m."; "6801"; "hybr. calabrochsenheimeri Stdr. Type"; "hybr. filip. × transalp. (calabr.)?".

ex Rothschild collection. Slide No. 699.

Mte. Faito is erroneously spelt "Mte. Falto" on the pin label. The genitalia are normal and the specimen is conspecific with *filipendulae* L.

[melilochsenheimeri]

(Pl. 55, fig. 12)

Type: ♀ 36 mm. "Italia mer. penins. Sorrento Mte. Faito 25.6. 1928 H. Stauder 950 m"; "6817"; "Zyg. hybr. melilochsenheimeri Stdr. ochsenh. × meliloti giussana Type".

ex Rothschild collection. Slide No. 634.

The genitalia are normal and the specimen is conspecific with *filipendulae* L. The red abdominal ring mentioned by Stauder in the description is superficial and false.

*Zygaena filipendulae* L. ssp. *campaniae* Rebel ab. *carnioligiussana* Stauder

*Zygaena* hybr. f. *carnioligiussana* Stauder, 1929, *Ent. Z.* 43 : 80.

(Pl. 55, fig. 13)

Type: ♂ 33 mm. "Italia mer. penins. Sorrento Mte. Falto 28.6. 1928 H. Stauder 950 m"; "6814"; "hybr. carnioligiussana Stdr."  
ex Rothschild collection. Slide No. 701.

The genitalia are normal but I treat the specimen as an aberration as it differs superficially from ssp. *campaniae* Rebel. Mte. Faito is erroneously spelt "Mte. Falto" on the pin label.

***Zygaena filipendulae* L. ssp. *campaniae* Rebel ab. *dubia* Staudinger**

*Zygaena filipendulae* ab. *dubia* Staudinger, 1861, in Staudinger & Wocke's *Cat. Lep.*, p. 21.  
*Zygaena* hybr. f. *melilodubia* Stauder, 1929, *Ent. Z.* **43**: 80.

[melilodubia]

(Pl. 55, fig. 14)

Type: ♂ 34 mm. "Italia mer. penins. Sorrento Mte. Falto 1.7. 1928. H. Stauder. Piano f. 1000 m"; "6818"; "hybr. melilodubia Stdr."  
ex Rothschild collection. Slide No. 636.

Mte. Faito is erroneously spelt "Mte. Falto" on the pin label. The genitalia are normal and the specimen is conspecific with *filipendulae* L.

***Zygaena filipendulae* L. ssp. *seeboldi* Oberthür**

*Zygaena filipendulae* ssp. *seeboldi* Oberthür, 1910, *Lép. Comp.* **4**: 543.

(Pl. 55, fig. 15)

Lectotype: ♂ 36 mm. "Bilbao."; "Espagne Bilbao T. Seebold"; "Seeboldi Obthr."; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 550.

***Zygaena filipendulae* L. ssp. *ramburii* H.-S. ab. *rosa* Oberthür**

*Zygaena rosa* Oberthür, 1909, *Lép. Comp.* **3**, pl. 22, figs. 106, 107.

(Pl. 55, fig. 16)

Type: ♂ 33 mm. "Syrie. Akbès Ch. Delagrangé Eté 1890"; "*Zygaena rosa*, Obthr type ♂"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXII No. 107"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 548.

A further specimen labelled "type ♀" is a male.

***Zygaena filipendulae* L. ssp. *syrriaca* Oberthür**

*Zygaena Syriaca* Oberthür, 1896, *Et. d'Ent.* **20**: 46.

*Zygaena Syriaca* (6-macul.) Oberthür, 1896, *Et. d'Ent.* **20**, pl. 8, fig. 137.

*Zygaena Syriaca-sexmaculata* Oberthür, 1910, *Lép. Comp.* **4**: 564.

(Pl. 55, fig. 18)

Lectotype: ♀ 39 mm. "Syrie. Akbès Ch. Delagrange Été 1890"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8. No. 137"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 631.

I take as typical the six-spotted form, to which Oberthür also applied the name *sexmaculata* Obthr.

In addition to the female lectotype, I figure on Pl. 55, fig. 19, a typical male labelled "Syrie. Akbès Ch. Delagrange Été 1890"; "Original zur Abbildung des *Z. syriaca* ♂ im Seitz, Suppl., Bd. 2, Tafel 3n 1930. H. Reiss."; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 678.

This specimen is 38 mm. in wingspan but appears larger than the female on the plate owing to a slightly higher magnification of the original photograph.

***Zygaena filipendulae* L. ssp. *syriaca* Obthr. ab. *quinquemaculata* Oberthür**

*Zygaena syriaca* (5-macul.) Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 136.

*Zygaena Syriaca-quinquemaculata* Oberthür, 1910, *Lép. Comp.* 4: 564.

(Pl. 55, fig. 20)

Type: ♂ 38 mm. "Syrie. Akbès Ch. Delagrange Été 1890"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 136"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 660.

***Zygaena filipendulae* L. ssp. *syriaca* Obthr. ab. *confluens* Oberthür**

*Zygaena syriaca* ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 138.

*Zygaena Syriaca-sexmaculata-confluens* Oberthür, 1910, *Lép. Comp.* 4: 564.

(Pl. 55, fig. 21)

Type: ♀ 40 mm. "Syrie. Akbès Ch. Delagrange Été 1890"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 138"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 632.

***Zygaena trifolii* Esper**

*Sphinx trifolii* Esper, 1783, *Die Schmett.* 2: 223, pl. 34, figs. 4, 5.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrtty. ab. *pygmaea* Cockayne**

*Zygaena trifolii* ab. *pygmaea* Cockayne, 1954, *Ent. Rec.* 66: 67, pl. 2, fig. 7.

(Pl. 55, fig. 17)

Type: ♂ 20 mm. "Watergate 9 Jn '95"; "Type ab. *pygmaea* Cockayne 1954" ex W. M. Christy collection. Slide No. 569.



***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *extrema* Tutt**

*Anthrocera trifolii* ab. *extrema* Tutt, 1899, *Brit. Lep.* 1 : 485.

(Pl. 55, fig. 22)

Type : ♂ 30 mm. " Watergate 3 Jn '95 "

ex W. M. Christy collection. Slide No. 567.

The specimen was figured by Christy in the *Entomologist*, 29 : 341, fig. 2.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *obsoleta* Tutt**

*Anthrocera trifolii* ab. *obsoleta* Tutt, 1899, *Brit. Lep.* 1 : 485.

(Pl. 55, fig. 23)

Type : ♂ 30 mm. " Watergate 26 Ma '96 "

ex W. M. Christy collection. Slide No. 566.

The specimen was figured by Christy in the *Entomologist*, 29 : 341, fig. 1.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *orichalca* Tutt**

*Anthrocera trifolii* ab. *orichalca* Tutt, 1899, *Brit. Lep.* 1 : 484.

Tutt applied the name *orichalca* to male specimens of *trifolii* which had the ground colour of the fore wings a bright bronzy-green. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *caerulea* Tutt**

*Anthrocera trifolii* ab. *caerulea* Tutt, 1899, *Brit. Lep.* 1 : 484.

In this aberration the ground colour in the males is a distinct bluish-purple. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *lutescens-basalis* Tutt**

*Anthrocera trifolii* ab. *lutescens-basalis* Tutt, 1899, *Brit. Lep.* 1 : 488.

In this aberration spots 1 and 2 are joined to 3 and 4, while 5 is separate. The normal red colour is replaced by yellow. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrty. ab. *lutescens-confluens* Tutt**

*Anthrocera trifolii* ab. *lutescens-confluens* Tutt, 1899, *Brit. Lep.* 1 : 488.

This aberration has all the spots confluent while the normal red colour is replaced by yellow. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrtv. ab. *lutescens-glycirrhziae* Tutt**

*Anthrocera trifolii* ab. *lutescens-glycirrhziae* Tutt, 1899, *Brit. Lep.* 1 : 488.

This aberration has the spots as in ab. *glycirrhziae* Hübn. while the red is replaced by yellow. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *palustrella* Vrtv. ab. *intermedia* Tutt**

*Anthrocera trifolii* ab. *intermedia* Tutt, 1899, *Brit. Lep.* 1 : 487.

In this aberration the red is replaced by dull orange tinged with red. The type is not in the British Museum.

***Zygaena trifolii* Esp. ssp. *decreta* Verity**

*Zygaena trifolii* race *decreta* Verity, 1926, *Ent. Rec.* 38 : 57.

*Zygaena trifolii-major* Tutt, 1897, *Ent. Rec.* 9 : 88 (preoccupied).

[*trifolii-major*]

(Pl. 55, fig. 24)

Lectotype : ♀ 32 mm. "Ham Ponds, Surrey. ✱ vii 91 ex coll. Tutt." ex Rothschild collection. Slide No. 651.

***Zygaena trifolii* Esp. ssp. *decreta* Vrtv. ab. *carnea* Cockayne**

*Zygaena trifolii* ab. *carnea* Cockayne, 1942, *Ent. Rec.* 54 : 35.

(Pl. 55, fig. 25)

Type : ♂ 31 mm. "Bagley Oxf'd 27.vi. 04. ✱"; "E. A. Cockayne 27. VI. 1904 Bagley Wood Oxford ✱"; "Type ab. *carnea* Ckyne. *Ent. Rec.* 1942. 54.35". ex Cockayne collection. Slide No. 568.

***Zygaena trifolii* Esp. ssp. *decreta* Vrtv. ab. *obscura* Tutt**

*Anthrocera trifolii* ab. *obscura* Tutt, 1899, *Brit. Lep.* 1 : 487.

(Pl. 55, fig. 26)

Type : ♂ 33 mm. "Angleterre Coll. Battershell Gill Vendue Salle Stevens 12, 13 Avril 1886."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII no 164"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 570.

***Zygaena trifolii* Esp. ssp. *palustris* Oberthür**

*Zygaena trifolii-palustris* (Bdv.) Oberthür, 1896, *Et. d'Ent.* 20 : 45.

(Pl. 55, fig. 27)

Lectotype : ♀ 36 mm. "Env. de Rennes Printemps 1894"; "trifolii palustris";  
"coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 160.

The lectotype was selected in 1958 (*Ent. Gaz.* 9 (4) : 185). Since this publication, I have found the specimen in the Boissduval collection labelled "Palustris", which Oberthür mentioned in his description. I figure this specimen on Pl. 56, fig. 1. Slide No. 735. According to Oberthür the specimen originated from Brittany.

***Zygaena trifolii*** Esp. ssp. ***palustris*** Obthr. ab. ***nigricans*** Oberthür

*Zygaena trifolii-palustris* ab. *nigricans* Oberthür, 1907, *Bull. Soc. ent. Fr.*, p. 220.

(Pl. 56, fig. 5)

Type : ♂ 33 mm. "Env. de Rennes 18-24 Juin 1907"; "Ab. nigricans, Obthr.  
*Bull. Soc. ent. France* 1907, p. 220."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 638.

***Zygaena trifolii*** Esp. ssp. ***palustris*** Obthr. ab. ***sexmaculata*** Oberthür

*Zygaena Trifolii-Palustris* (Bdv.) (6-macul.) Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 151.

*Zygaena Palustris sexmaculata* Oberthür, 1910, *Lép. Comp.* 4 : 500.

(Pl. 56, fig. 2)

Type : ♂ 33 mm. "Env. de Rennes Printemps 1894"; "Lépidoptère figuré dans  
la XXe livraison des Etudes d'Entomol. Pl. 8 No. 151". "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 639.

***Zygaena trifolii*** Esp. ssp. ***palustris*** Obthr. ab. ***confluens*** Oberthür

*Zygaena Trifolii-Palustris* (Bdv.) ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 153.

(Pl. 56, fig. 3)

Type : ♀ 37 mm. "Env. de Rennes Printemps 1894"; "Lépidoptère figuré  
dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 153"; "coll. Ch.  
Oberthür."

ex Rothschild collection. Slide No. 641.

***Zygaena trifolii*** Esp. ssp. ***palustris*** Obthr. ab. ***confluens-sexmaculata*** Oberthür

*Zygaena Trifolii-Palustris* (Bdv.) ab. *confluens* (6-Macul.) Oberthür, 1896, *Et. d'Ent.* 20, pl. 8,  
fig. 152.

*Zygaena Palustris sexmaculata* Oberthür, 1910, *Lép. Comp.* 4 : 500.

(Pl. 56, fig. 4)

Type : ♂ 33 mm. "Env. de Rennes Printemps 1893"; "Lépidoptère figuré  
dans la XXe livraison des Etudes d'Entomol. Pl. 8 No 152"; "coll. Ch.  
Oberthür."

ex Rothschild collection. Slide No. 640.

***Zygaena trifolii* Esp. ssp. *olbiana* Oberthür**

*Zygaena Olbiana* Oberthür, 1910, *Lép. Comp.* 4 : 496.

(Pl. 56, fig. 6)

Type : ♂ 31 mm. "Hyères (Var) Le Ceinturon 21-V-1906 Rd Powell." ; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII No 168" ; "Olbiana, Obthr. forme de trifolii, Lépidopt. comparée IV. 1910 ♂." ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 647.

***Zygaena trifolii* Esp. ssp. *duponcheliana* Oberthür**

*Zygaena Duponcheliana* Oberthür, 1910, *Lép. Comp.* 4 : 495.

(Pl. 56, fig. 7)

Type : ♂ 31 mm. "Pyrénées Orientales Vernet-les-Bains R. Oberthür Eté 1891" ; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 150" ; "forma : Duponcheliana, Obthr. Lépid. comparée IV-1910." ; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 646.

***Zygaena trifolii* Esp. ssp. *syracusia* Zeller**

*Zygaena Syracusia* Zeller, 1847, *Isis von oken.*, p. 301.

*Zygaena syracusiae auctorum.*

(Pl. 56, fig. 8)

Lectotype : ♂ 30 mm. "Syracuz excl. 17/5 44."

ex Zeller collection. Slide No. 648.

The correct spelling is *syracusia*, not *syracusiae*, which has been used by various authors in the past.

***Zygaena trifolii* Esp. ssp. *trinacria* Verity**

*Zygaena lonicerae* race *trinacria* Verity, 1917, *Bull. Soc. ent. Fr.*, p. 224.

*Zygaena trifolii* ssp. *trinacria* Verity, 1926, *Ent. Rec.* 38 : 11.

(Pl. 56, fig. 9)

Lectotype : ♂ 34 mm. "Sicilia Lupo 5 Kr. E. Ragusa" ; "31" ; "Sicily, Coll. E. Ragusa." ; "race trinacria Vrtty. spec. typicum."

ex Rothschild collection. Slide No. 669.

***Zygaena trifolii* Esp. ssp. *trinacria* Vrtty. ab. *krügeri* Ragusa**

*Anthocere* [sic] *Trifolii syracusia* var. *Krügeri* Ragusa, 1924, *Boll. Lab. Zool. Portici.* 18 : 88.

(Pl. 56, fig. 10)

Lectotype: ♀ 36 mm. "Sicilia Lupo. 6 Kr. E. Ragusa"; "26"; "Sicily, coll. E. Ragusa."

ex Rothschild collection. Slide No. 670.

***Zygaena trifolii* Esp. ssp. *caerulescens* Reiss**

*Zygaena trifolii* ssp. *caerulescens* Reiss, 1936, *Ent. Rdsch.* 54: 90, pl. 2, figs.

*Zygaena australis* var. *caerulescens* Oberthür, 1910, *Lép. Comp.* 4: 493 (ab. *caerulescens* Obthr. name invalid).

(Pl. 56, fig. 11)

Lectotype: ♂ 28 mm. "Sierra de Alfakar R. Obr. & L. Bl. Juillet 1879"; "Ab. *caerulescens* Obthr. Lépid. comparée. IV-1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 645.

Although Oberthür used the term "var", the text implies that he was referring to an aberration. However, the form has since proved to be a good subspecies and apparently it is Reiss who first quoted *caerulescens* as a subspecies. According to the rules of nomenclature Reiss is the correct author of the subspecific name *caerulescens*.

***Zygaena trifolii* Esp. ssp. *barcelonensis* Reiss f.t. *intricata* Sagarra ab. *depravata* Sagarra**

*Zygaena trifolii* f. *depravata* Sagarra, 1925, *Bull. Inst. catal. Hist. nat.* (2) 5: 273.

*Zygaena clorinda* Bethune-Baker, 1926, *Ent. Rec.* 38: 84.

[clorinda]

(Pl. 56, fig. 17)

Holotype: ♂ 24 mm. "CATALONIA Llobregat 2 m. 4.10. 25. Querci"; "290", on the reverse side of the data label is written "*Zygaena quercii* B-B. Type ♂".  
ex Bethune-Baker collection. Slide No. 650.

The holotype and allotype are labelled "*Zygaena quercii*", but the valid name is *clorinda*, which is however, synonymous with *depravata* Sagarra.

***Zygaena trifolii* Esp. ssp. *australis* Oberthür**

*Zygaena Australis* (Lederer) Oberthür, 1910, *Lép. Comp.* 4: 491.

(Pl. 56, fig. 12)

Lectotype: ♂ 28 mm. "Algérie Lambèze L. Bleuse Juin 1885"; "australis, sec. Obthr. Lépid. compar. IV-1910"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 644.

***Zygaena trifolii* Esp. ssp. *australis* Obthr. ab. *aurorina* Oberthür**

*Zygaena australis* ab. *aurorina* Oberthür, 1910, *Lép. Comp.* 4: 493.



(Pl. 56, fig. 13)

Lectotype : ♂ 31 mm. " Algérie Lambèse J. Merkl. Juin 1884 " ; " aurorina Obthr. Lépid. compar. IV-1910." ; " coll. Ch. Oberthür." ;  
ex Rothschild collection. Slide No. 642.

*Zygaena trifolii* Esp. ssp. *australis* Obthr. ab. *ruficostata* Holl

*Zygaena trifolii australis* ab. *ruficostata* Holl, 1912, *Bull. Soc. Hist. nat. Afr. N.* 4 (6) : 117.

(Pl. 56, fig. 14)

Type : ♂ 24 mm. " H. Dey 18.6. 10 " ; " Type décrit Bul. S.H.N. de l'Afr. du Nord No. 6. 15.6. 12 page 117 " ; " Collection Capt. HOLL." ;  
ex Rothschild collection. Slide No. 674.

*Zygaena trifolii* Esp. ssp. *seriziati* Oberthür

*Zygaena Seriziati* Oberthür, 1876, *Et. d'Ent.* 1 : 33.

(Pl. 56, fig. 15)

Type : ♂ 29 mm. " Collo " ; " *Zygaena Seriziati*, Oberthür *Etud. d'Entomol.* IIIe liv'on, pl. V, fig. 7. page 41 " ; " coll. Ch. Oberthür." ;  
ex Rothschild collection. Slide No. 643.

*Zygaena trifolii* Esp. ssp. *diffusemarginata* Rothschild

*Zygaena trifolii diffusemarginata* Rothschild, 1933, *Novit. zool.* 38 : 324.

(Pl. 56, fig. 16)

Type : ♂ 32 mm. " Hauta Kasdir Marruecos m. 1750 Ferrer 15-7-32 " ; " 310 " ;  
" *Zygaena trifolii diffusomarginata* Rothsch. Type " ;  
ex Rothschild collection. Slide No. 649.

The published name is *diffusemarginata*, and is the valid name although " diffusomarginata " is written on the pin label.

### *Zygaena lonicerae* Scheven

*Sphinx lonicerae* Scheven, 1777, *Naturf.* 10 : 97.

*Zygaena lonicerae* Schev. ab. *asymetrica* Oberthür

*Zygaena Lonicerae* ab. *asymetrica* Oberthür, 1911, *Lépid. Comp.* 5 (1) : 197, pl. 63, fig. 587.

(Pl. 56, fig. 18)

Type : ♀ 35 mm. " abb. de Lonicerae " ; " ex. coll. Reynald de Lyon " ; " *Zygaena Lonicerae* ♀ Lépid. comparée. Vol. V-No. 587." ; " coll. Ch. Oberthür." ;  
ex Rothschild collection. Slide No. 661.

***Zygaena lonicerae*** Schev. ab. ***citrina*** Speyer*Zygaena lonicerae* ab. *citrina* Speyer, 1887, *Stettin. ent. Ztg.* **48**: 334.*Zygaena Lonicerae* ab. *flava* Oberthür, 1896, *Et. d'Ent.* **20**: 43, pl. 8, fig. 148.

[flava]

(Pl. 56, fig. 19)

Type: ♀ 39 mm. "Cevennes."; "Ex. Coll. Bellier"; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 148"; "coll. Ch. Oberthür." ex Rothschild collection. Slide No. 654.

***Zygaena lonicerae*** Schev. ssp. ***transferens*** Vrty. ab. ***cuneata*** Tutt*Anthrocera lonicerae* ab. *cuneata* Tutt, 1899, *Brit. Lep.* **1**: 468.

(Pl. 56, fig. 20)

Type: ♂ 30 mm. "Chattenden 24.vi. 93"; "Tutt Coll."; "type cuneata". ex Tutt collection. Slide No. 573.

***Zygaena lonicerae*** Schev. ssp. ***transferens*** Vrty. ab. ***miniata*** Tutt*Anthrocera lonicerae* ab. *miniata* Tutt, 1899, *Brit. Lep.* **1**: 467.

(Pl. 57, fig. 31)

Type: ♂ 26 mm. "Tutt Coll. Chattenden, 30.v. 94"; "type miniata". ex Tutt collection. Slide No. 574.

***Zygaena lonicerae*** Schev. ssp. ***transferens*** Vrty. ab. ***centripuncta*** Tutt*Anthrocera lonicerae* ab. *centripuncta* Tutt, 1899, *Brit. Lep.* **1**: 468.

(Pl. 56, fig. 21)

Lectotype: ♀ 34 mm. "centripuncta Chattenden vii. 92"; "Tutt coll.". ex Tutt collection. Slide No. 572.

***Zygaena lonicerae*** Schev. ssp. ***transferens*** Vrty. ab. ***minor*** Tutt*Anthrocera lonicerae* ab. *minor* Tutt, 1899, *Brit. Lep.* **1**: 467.

(Pl. 56, fig. 22)

Type: ♂ 24 mm. "Tutt Coll. Chattenden. 30.v. 94"; "type minor". ex Tutt collection. Slide No. 571.

***Zygaena lonicerae*** Schev. ssp. ***transferens*** Vrty. ab. ***trivittata*** Tutt*Anthrocera lonicerae* ab. *trivittata* Tutt, 1899, *Brit. Lep.* **1**: 468.

This aberration has the spots of the fore wings joined into three longitudinal streaks as follows: 1, 2 + 4, 3 + 5. The type is not in the British Museum.

***Zygaena lonicerae* Schev. ssp. *transferens* Vrtv. ab. *eboracae* Prest**

*Zygaena eboracae* Prest, 1883, *Entomologist*, **16** : 274.

(Pl. 56, fig. 23)

Lectotype: ♂ 30 mm. "Z. 'Eboracae' Prests Sale 1884."; "Var Eboracae W. Prest"; "Angleterre ex. Coll. Howard Vaughan vendue Salle Stevens 22 & 23 Avril 1890"; "coll. Ch. Oberthür."  
ex Rothschild collection. Slide No. 680.

***Zygaena lonicerae* Schev. ssp. *transferens* Vrtv. ab. *grisescens* Cockayne**

*Zygaena lonicerae* ab. *grisescens* Cockayne, 1954, *Ent. Rec.* **66** : 67.

(Pl. 56, fig. 24)

Type: ♂ 32 mm. "coll. Gregson"; "S. Webb coll Barrett pl. 59. 3c."; "Type ab. *grisescens* Cockayne 1954".  
ex R. Adkin collection. Slide No. 575.

This specimen is figured by Barrett, *Lepidoptera of the British Isles*, **2**, pl. 59, fig. 3c.

***Zygaena lonicerae* Schev. ssp. *transferens* Vrtv. f. loc. *latomarginata* Tutt**

*Anthrocera lonicerae* var. *latomarginata* Tutt, 1899, *Brit. Lep.* **1** : 468.

(Pl. 56, fig. 25)

Lectotype: ♂ 35 mm. "Filey, Yorkshire. vii. 1892 ex coll. Tutt."  
ex Rothschild collection. Slide No. 663.

***Zygaena lonicerae* Schev. ssp. *insularis* Tremewan**

*Zygaena lonicerae* ssp. *insularis* Tremewan, 1960, *Ent. Gaz.* **11** (4) : 191.

(Pl. 56, fig. 26)

Holotype: ♀ 36 mm. "Armagh, vii. 1890 ex coll. Tutt."; "Z. *lonicerae* ssp. *insularis* Tremewan. Holotype ♀ det. W. G. Tremewan, 1959."  
ex Rothschild collection. Slide No. 679.

The specimen was taken at Mullinures, Co. Armagh, according to Tutt, *vide Brit. Lep.* **1** : 468.

***Zygaena lonicerae* Schev. ssp. *major* Frey**

*Zygaena Lonicerae* var. *Major* Frey, 1880, *Lep. Schweiz*, p. 67.

(Pl. 56, fig. 27)

Lectotype: ♀ 41 mm. "Z. *Lonicerae* Var. *Major*. Frey. St. Nicolas."  
ex Frey collection. Slide No. 652.

***Zygaena lonicerae* Schev. ssp. *major* Frey ab. *confluens* Oberthür**

*Zygaena Dubia* ab. *confluens* Oberthür, 1896, *Et. d'Ent.* 20, pl. 8, fig. 147.

*Zygaena Lonicerae* ab. *confluens* Oberthür, 1911, *Lép. Comp.* 5 (1) : 197, pl. 63, fig. 586.

[*confluens* Oberthür, 1896]

(Pl. 57, fig. 2)

Type: ♂ 37 mm. "Vernet-l-Bains R. Oberthür Juillet 1885.; "Lépidoptère figuré dans la XXe livraison des Etudes d'Entomol. Pl. 8 No. 147"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 346.

An examination of the genitalia showed the specimen to be an aberration of *lonicerae* Scheven.

[*confluens* Oberthür, 1911]

(Pl. 57, fig. 3)

Type: ♀ 39 mm. "Vernet-l-Bains R. Oberthür Juillet 1885."; "Zygaena Lonicerae ♀ Lépid. comparée Vol. V. No. 586."; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 662.

***Zygaena lonicerae* Schev. ssp. *major* Frey ab. *incendium* Oberthür**

*Zygaena lonicerae-incendium* Oberthür, 1909, *Lép. Comp.* 3, pl. 22, fig. 105.

(Pl. 57, fig. 1)

Type: ♂ 40 mm. "Valais, Plan Cerisier près Martigny. 1907 Juin—A. Wullschlegel."; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908—1909. Pl. XXII fig. 105"; "coll. Ch. Oberthür."

ex Rothschild collection. Slide No. 653.

***Zygaena lonicerae* Schev. ssp. *major* Frey ab. *nigerrima* Curtis**

*Zygaena trifolii* ab. *nigerrima* Curtis, 1934, *Ent. Rec.* 46 : 37, pl. 1, fig. 3.

(Pl. 57, fig. 4)

Type: ♀ 36 mm. "Maurin pres Barcelonette. Basses Alpes, France 1/10 : viii : 1932 W. P. Curtis"; "23587 ZYGAENA trifolii Esp. ab nigerrima Curtis detd by W. P. Curtis 23 : ix : 1933".

ex Curtis collection.

The abdomen of this specimen is unfortunately missing, but I am confident that this is an aberration of *lonicerae* Scheven. It has been suggested that it is a *transalpina* Esp. (*vide Ent. Rec.* 46 : 37), but the position of the spots on the fore wings eliminates this species. H. Reiss has also determined the specimen as an aberration of *lonicerae* Scheven.

*Zygaena lonicerae* Schev. ssp. *major* Frey ab. *semidiaphana* Stauder*Zygaena lonicerae major* f. *semidiaphana* Stauder, 1929, *Ent. Z.* 43 : 80.

(Pl. 57, fig. 5)

Type: ♀ 33 mm. "Teriol. mer. Castelrotto 900 m. 22.7. 1928 H. Stauder";  
 "6812"; "lonicerae f.n. semidiaphana Stdr."  
 ex Rothschild collection. Slide No. 682.

*Zygaena lonicerae* Schev. ssp. *kindermanni* Oberthür*Zygaena lonicerae Kindermanni* Oberthür, 1910, *Lép. Comp.* 4 : 544 (*partim*).

(Pl. 57, fig. 6)

Lectotype: ♂ 32 mm. "stochadis Kindermann"; "stochadis-Kindermanni,  
 Obthr. Lépid. comparee IV-1910"; "EX Coll. DE GRASLIN"; coll. Ch.  
 Oberthür."

ex Rothschild collection. Slide No. 553.

There are eight specimens in the Oberthür collection. Two of these specimens are from the de Graslin collection and are labelled "stochadis Kindermann". Two specimens are from the Guenée collection; one labelled "Russie", the second labelled "Russie?". Four specimens are from the Boisduval collection and are without data. I have selected as the lectotype a specimen from the de Graslin collection which, according to the label, was collected by Kindermann.

Further there are nineteen specimens in the Oberthür collection which had been referred to *kindermanni* by Oberthür. They are not a subspecies of *lonicerae* but *filipendulae* L. from Spain and have been described by Burgeff under the name of *himmighofeni*. Four specimens are from the de Graslin collection, two of these are labelled "stochadis oct. barcelonne Stgr."; the third specimen is labelled "Staudin. Stochadis. Catalogne" while the fourth specimen is labelled "Beck. janvier 55". Six specimens are from the Guenée collection of which two are labelled "Barcelon", two "Andales", one labelled "Catalogne" while the sixth specimen has no data. A specimen from the Boisduval collection is also without data. Of the eight remaining specimens, seven are from the Bellier collection; four are labelled "Espagne, Barcelone" and three are without data. Finally a specimen labelled "Espagne" has no indication of the collector or the collection from which it originated.

Oberthür stated that *kindermanni* from the Caucasus is the same form as that collected by Himmighoffen from Catalonia. In addition to the lectotype I figure a specimen from Catalonia which was labelled *kindermanni* by Oberthür and which is in fact a subspecies of *filipendulae* L., Pl. 57, fig. 7.

The data of the specimen is as follows: "Staudin. stochadis. Catalogne"; "303"; "ex. Coll. DE GRASLIN"; "Stochadis-Kindermann Obthr. Lépid. compar. IV. 1910"; "coll. Ch. Oberthür."  
 ex Rothschild collection. Slide No. 655.



Subg. *MESEMBRYNUS* Hübner

*Zygaena speciosa* Reiss

*Zygaena speciosa* Reiss, 1937, *Ent. Rdsch.* 54 : 466.

*Zygaena speciosa* Reiss ssp. *suleimanicola* Reiss

*Zygaena speciosa* var. *suleimanicola* Reiss, 1937, *Mitt. münchen. ent. Ges.* 27 : 165.

(Pl. 57, fig. 11)

Cotype : ♀ 31 mm. "Persia sept. Elburs mts. c.s. Tacht i Suleiman. Särđab Tal (Heđerćam) 4200 m. 20.7. 37 E. Pfeiffer & W. Forster München leg."; "Cotype ♀ *suleimanicola* Reiss 1937. H. Reiss".

Slide No. 739.

*Zygaena corsica* Boisduval

*Zygaena corsica* Boisduval, 1829, *Mon. Zyg.*, p. 81, pl. 5, fig. 2.

*Zygaena corsica* Boisd. ssp. *sardiniensis* Holik

*Zygaena corsica* ssp. *sardiniensis* Holik, 1936, *Lambillionea*, 36 : 226.

(Pl. 57, fig. 9)

Cotype : ♂ 25 mm. "Aritzo Sardinia 900 m. 23.6. 35 Dr. H. Bytinski-Salz"; "Cotypus".

Slide No. 726.

There are four cotypes in the British Museum.

*Zygaena corycia* Staudinger

*Zygaena Brizae* Esp. v. *Corycia* Staudinger, 1878, *Horae Soc. ent. Ross.* 14 : 318.

*Zygaena corycia* Stdgr. ssp. *staudingeriana* Reiss

*Zygaena corycia* var. *staudingeriana* Reiss, 1932, *Int. ent. Z.* 26 : 270.

(Pl. 57, fig. 10)

Cotype : ♂ 25 mm. "Becharre Libanon Juni 31. Kulzer."; "CO-TYPE VON *Z. CORYCIA* SSP. *STAUDINGERIANA* REISS".

Slide No. 283.

*Zygaena alpherakyi* Sheljuzhko

*Zygaena Alpherakyi* (Chr.i.l.) Sheljuzhko, 1936, *Folia zool. hydrobiol.* 9 : 17.

***Zygaena alpherakyi* Shelj. ssp. *ossetica* Holik**

*Zygaena alpherakyi* ssp. *ossetica* Holik, 1939, *Ann. mus. zool. Polon.* **13** : 248.

(Pl. 57, fig. 12)

Cotype: ♂ 33 mm. "Karaugom 1800, 17. VII leg. R. Wojtusiak"; "Polska Wyprawa na Kaukaz VII-VIII. 1935"; "Z. alpherakyi ssp. *ossetica* Holik. COTYPE".

Slide No. 729.

There are two cotypes in the British Museum.

***Zygaena diaphana* Staudinger**

*Zygaena pilosellae* var. *diaphana* Staudinger, 1887, *Berl. ent. Z.* **31** : 31.

(Pl. 57, fig. 13)

Paralectotype: ♂ 29 mm. "Hadjin v. *diaphana*"; "18/5"; "Origin."; "ex collect. Staudinger."; "Z. *purpuralis diaphana* Stgr. det. O. Holik".  
ex Zoologisches Museum, Berlin. Slide No. 192.

A lectotype was selected in 1958 and is now in the Zoologisches Museum, Berlin (*vide Ent. Gaz.* **9** (4) : 183, 1958).

***Zygaena diaphana* Stdgr. ssp. *sareptensis* Rebel**

*Zygaena purpuralis* var. *sareptensis* Rebel, 1901, in Staudinger & Rebel's *Cat. Lep.*, p. 380.

(Pl. 57, fig. 14)

Paralectotype: ♀ 36 mm. "Sarepta 90. Wick"; "ex collect. Staudinger"; "Z. *purpuralis sareptensis* Stgr. det. O. Holik".  
ex Zoologisches Museum, Berlin. Slide No. 193.

A lectotype was selected in 1958 and is now in the Zoologisches Museum, Berlin (*vide Ent. Gaz.* **9** (4) : 183, 1958).

Subg. **AGRUMENIA** Hübner***Zygaena johannae* Le Cerf**

*Zygaena johannae* Le Cerf, 1923, *Bull. Soc. ent. Fr.*, p. 224.

***Zygaena johannae* Le Cerf ssp. *turbeti* Le Cerf**

*Zygaena johannae* ssp. *turbeti* Le Cerf, 1929, *Bull. Soc. ent. Fr.*, p. 263.

(Pl. 57, fig. 15)

Cotype: ♂ 22 mm. "MAROC Moyen Atlas"; "ich bou Naçeur 1 er.-VII-1929. 3,300-3,400 m. F. Le Cerf"; "COTYPE"; "Zyg. *johannae-turbeti* Le Cf. ♂ Cotype F. Le Cerf det.".

Slide No. 740.

There are three cotypes in the British Museum.

*Zygaena cocandica* Erschoff

*Zygaena cocandica* Erschoff, 1874, in Fedtshenko, *Lep. Turkestan*, p. 28, pl. 2, fig. 22.

*Zygaena cocandica* Ersch. ssp. *banghaasi* Burgeff

*Zygaena cocandica banghaasi* Burgeff, 1927, *Horae Macrolep.* 1 : 56, pl. 9, figs. 18, 19.

(Pl. 57, fig. 16)

Cotype : ♂ 27 mm. "Dombratschi Buchara merid. 28 juli 2000 m."; "Co-Type e Collection Bang-Haas"; "690".

ex Rothschild collection. Slide No. 737.

There are six cotypes in the British Museum.

*Zygaena mangeri* Burgeff

*Zygaena mangeri* Burgeff, 1927, *Horae Macrolep.* 1 : 55, pl. 9, fig. 17.

(Pl. 57, fig. 17)

Cotype : ♀ 27 mm. "Paghman Gbg. Kabul Afghanistan 1926"; "115"; "Co-Type e Collection Bang-Haas"; "mangeri".

ex Rothschild collection. Slide No. 657.

*Zygaena escalerae* Poujade

*Zygaena Escalerae* Poujade, 1900, *Bull. Mus. Hist. nat. Paris*, 6 (2) : 68.

(Pl. 57, fig. 18)

Paratype : ♂ 22 mm. "Haut-Kharoum, Chindáar (Vallée) Escalera VI-VII 1899"; "Z. Escalerae Pouj. (Type)"; "A servi de Modèle à J. Culot de Genève, pour la IIIe livraison de Lépidoptérologie comparée 1908-1909 Pl. XXVIII No. 172"; "coll. Ch. Oberthür".

ex Rothschild collection. Slide No. 520.

The type of *escalerae* Pouj. is in the Muséum National d'Histoire Naturelle, Paris. The above indicated specimen is labelled "type" but should be considered a paratype.

*Zygaena olivieri* Boisduval

*Zygaena olivieri* Boisduval, 1829, *Mon. Zyg.*, p. 98, pl. 6, fig. 4.

*Zygaena olivieri* Boisd. ssp. *libanicola* Burgeff

*Zygaena olivieri libanicola* Burgeff, 1927, *Horae Macrolep.* 1 : 55.

(Pl. 57, fig. 19)

Cotype : ♂ 27 mm. "Libanon or. Zahlé"; "Co-Type e Collection Bang-Haas"; "116".

ex Rothschild collection. Slide No. 738.

There are two cotypes in the British Museum.

*Zygaena sogdiana* Erschoff

*Zygaena sogdiana* Erschoff, 1874, in Fedtshenko, *Lep. Turkestan*, p. 27, pl. 2, fig. 20.

*Zygaena sogdiana* Ersch. ssp. *tshimganica* Holik

*Zygaena sogdiana* ssp. *tshimganica* Holik, 1936, *Ent. Rdsch.* 53 : 5.

(Pl. 57, fig. 20)

Cotype: ♂ 29 mm. "Tian-Shan oc. Tshimgan 1500-1600 m. alt. 30.vi. 1934 L. Sheljuzhko leg"; "482"; "Co-Type e Collection Bang-Haas".  
ex Rothschild collection. Slide No. 742.

There are two cotypes in the British Museum.

*Zygaena formosa* Herrich-Schäffer

*Zygaena Formosa* Herrich-Schäffer, 1851, *Schmett. Europa*, 2, pl. 14, fig. 99.

*Zygaena Formosa* Herrich-Schäffer, 1854, *Schmett. Europa*, 6 : 45.

*Zygaena formosa* H.-S. ssp. *kotzschi* Reiss

*Zygaena kotzschi* Reiss, 1935, *Int. ent. Z.* 28 : 489.

(Pl. 57, fig. 21)

Cotype: ♂ 25 mm. "Armenien Khashkhash-Dagh Geröll-Südabhang. 3200 m. 1.-10. 7. leg. Kotsch"; "Cotype ♂ Kotschi Reiss 1935. H. Reiss".  
Slide No. 741.

There are two cotypes in the British Museum.

*Zygaena carniolica* Scopoli

*Sphinx carniolica* Scopoli, 1763, *Ent. Carniol.*, p. 189.

*Zygaena carniolica* Scop. ssp. *syrmica* Holik

*Zygaena carniolica* var. *syrmica* Holik, 1939, *Mitt. münchen. ent. Ges.* 29 : 183.

(Pl. 57, fig. 23)

Cotype: ♀ 29 mm. "Slavonia Fruska Gora 28.6.-12.7. 35. No 6462 W. Forster München."; "Z. carniolica v. syrmica Holik COTYPE".  
Slide No. 732.

*Zygaena carniolica* Scop. ssp. *parisiensis* Holik

*Zygaena carniolica* ssp. *modesta* var. *parisiensis* Holik, 1938, *Lambillionsa*, 38 : 159.

(Pl. 57, fig. 22)

Paratype: ♂ 28 mm. "LARDY (S. & O.) 14.7.36 Coll. Le Charles"; "MUSEUM PARIS 1958 coll. L. Le Charles"; "PARATYPE"; "COTYPE".

Slide No. 733.

There are two paratypes in the British Museum.

***Zygaena loti*** Schiffermüller & Denis

*Sphinx loti* Schiffermüller & Denis, 1775, *Wien. Verz.*, p. 45.

***Zygaena loti*** S. & D. ssp. *karatshaica* Sheljuzhko

*Zygaena achilleae* ssp. *karatshaica* Sheljuzhko, 1936, *Folia. zool. hydrobiol.* 9: 19.

(Pl. 57, fig. 24)

Cotype: ♂ 32 mm. "Teberda (Cauc. S.) 26. VII 1933. L. Sheljuzhko leg. coll. L. Sheljuzhko"; "Co-Type e Collection Bang-Haas".

ex Rothschild collection. Slide No. 728.

There are nine cotypes in the British Museum.

Subg. **ZYGAENA** Fabricius

***Zygaena erebus*** Staudinger

*Zygaena erebus* Staudinger, 1867, *Stettin. ent. Ztg.* 28: 101.

***Zygaena erebus*** Stdgr. ssp. *chaos* Burgeff

*Zygaena chaos* Burgeff, 1926, *Mitt. münchen. ent. Ges.* 16: 15.

(Pl. 57, fig. 25)

Cotype: ♂ 28 mm. "Z. chaos Bgff. cot. Bethania (Georg) leg. Tkatschukoff."; "118"; "Co-Type e Collection Bang-Haas".

ex Rothschild collection. Slide No. 743.

***Zygaena nevadensis*** Rambur

*Zygaena nevadensis* Rambur, 1858, *Cat. Syst. Andal.*, p. 166, pl. 1, fig. 10.

***Zygaena nevadensis*** Ramb. ssp. *schmidti* Reiss

*Zygaena scabiosae* ssp. *schmidti* Reiss, 1931, *Int. ent. Z.* 26: 112.

(Pl. 57, fig. 26)

Cotype: ♂ 27 mm. "Arenas S. Pedro Prov. Avila vi. 1927 A. SCHMIDT."; "Cotype ♂ schmidti Reiss 1931. H. Reiss".

ex Rothschild collection. Slide No. 727.



*Zygaena filipendulae* Linnaeus

*Sphinx filipendulae* Linnaeus, 1758, *Syst. Nat.*, ed. X, p. 494 (with reference to *Fauna Suecica*, p. 256, 1746).

*Zygaena filipendulae* L. ssp. *calxensis* Le Charles

*Zygaena filipendulae calxensis* Le Charles, 1949, *Rév. franç. Lépid.* 12 : 179.

(Pl. 57, fig. 27)

Paratype : ♂ 33 mm. "Env. de PEYRELEAU Aveyron 14-17 vii 36 L. Le Charles"; "MUSEUM PARIS 1958 coll. L. Le Charles"; "PARATYPE".

Slide No. 734.

There are two paratypes in the British Museum.

*Zygaena filipendulae* L. ssp. *ciscaucasica* Sheljuzhko

*Zygaena filipendulae* ssp. *ciscaucasica* Sheljuzhko, 1936, *Folia zool. hydrobiol.* 9 : 20.

(Pl. 57, fig. 28)

Cotype : ♂ 32 mm. "Teberda (Cauc. S.) 23. VII 1933. L. Sheljuzhko leg. Coll. L. Sheljuzhko"; "Co-Type e Collection Bang-Haas".

ex Rothschild collection. Slide No. 730.

There are nine cotypes in the British Museum.

*Zygaena filipendulae* L. ssp. *wojtusiaki* Holik

*Zygaena filipendulae* ssp. *wojtusiaki* Holik, 1939, *Ann. mus. zool. Polon.* 13 : 254.

(Pl. 57, fig. 29)

Cotype : ♀ 34 mm. "Karaugom 1800-20. VII leg. R. Wojtusiak"; "Polska Wyprawa na Kaukaz VII-VIII. 1935"; "Z. filipend. ssp. wojtusiaki Holik COTYPE".

Slide No. 731.

*Zygaena lonicerae* Scheven

*Sphinx lonicerae* Scheven, 1777, *Naturf.* 10 : 97.

*Zygaena lonicerae* Schev. ssp. *deludens* Koch

*Zygaena lonicerae* ssp. *deludens* Koch, 1944, *Mitt. münchen. ent. Ges.* 34 : 72.

(Pl. 57, fig. 30)

Paratype : ♀ 35 mm. "Bav. mer. Eisenburg Memmingen M.41. No. W. Forster. München"; "PARATYPE *Zygaena lonicerae deludens* Koch".

The genitalia of this specimen are missing.

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